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## "FRUIT WORLD OF AUSTRALASIA."

Representing the Deciduous, Citrus and Dried Fruits Industry of Australasia.

Published the First of each Month.

## Editorial and Management Notices.

**Articles and Photographs.**—The Editor will always be very pleased to receive articles and photographs for publication. Articles on spraying, pruning, drainage, marketing, and other cultural matters, and reports of meetings, are welcomed. Please write on one side of paper only; include name and address (not necessarily for publication). Press matter sent in an open envelope, marked "Printer's MSS." postage rate: 2 ozs., 1½d. Photographs, if sent in an open-ended package, marked "Photos only," will travel at 2 ozs., 1½d. A short description of the photos, should be written on the back.

We do not hold ourselves responsible for the views expressed by our correspondents.

## Subscriptions.

The annual subscription, post free within Australia and New Zealand, is 8/6. All other places, 10/6, post free. New subscriptions can commence at any date. Subscribers should notify us immediately of any change of address.

**Renewal Subscriptions** are due during the last month of the term covered by the previous payment, and unless notified to the contrary, the fact that the subscriber continues to accept delivery of the journal, is taken as proof that continuation of the subscription is desired, and we will continue to send regularly until notified in writing or copies are returned through the post.

## Advertisements.

"The Fruit World of Australasia" is an advertising medium of proved value. Advertising rates may be had on application to our Head Office, or to agents in the various States, as set out below.

Changes of copy for advertisements must be in our hands on or before the 17th of the month prior to publication.

Readers are asked to make their purchases from our advertisers, who cover all lines of interest to orchardists, at the same time mentioning this journal. By so doing, the grower, the advertiser, and this paper will benefit.

Every care is taken to publish advertisements from reliable houses only, and to see that advertisements of an undesirable nature are not published. The management reserve the right to refuse to publish any announcements that they may regard as undesirable, either from the point of view of the goods offered or in the wording of the advertisement, notwithstanding the fact that a contract may have been entered into for the use of a certain space.

"The Fruit World" Offices (where copies and full particulars are obtainable) are as follows:—

**Victoria** (Head Office): 9 Queen Street, Melbourne. **New South Wales**: Carruthers, Farrum & Co., 77 King Street, Sydney. **South Australia**: W. F. McConnell, Grenfell Buildings, Grenfell Street, Adelaide. **Tasmania**: Saunders & Co., Murray Street, Hobart. **Western Australia**: D. L. Hetherington, Colonial Mutual Buildings, St. George's Terrace, Perth. **Queensland**: Gordon & Gotch Ltd., Queen Street, Brisbane. **New Zealand**: Gordon & Gotch Ltd., Wellington, Dunedin and Auckland. **Great Britain**: Harvey H. Mason, 1 Mitre Court, Fleet Street, London, E.C., England.

R. E. BOARDMAN, A.F.I.A., Managing Director and Editor.

E. H. WRAGG, Secretary and Advertising Manager.

**Tasmanian Director**: HON. L. M. SHOOBRIDGE, M.L.C.

## Editorial.

## Fruit Fly at Mildura.

## The New Departmental Policy Must Include Adequate Research and Additional Inspectors.

The news that the Mediterranean Fruit Fly had made its unwelcome appearance at Mildura, Vic., is serious enough, and if the pest is not eradicated it will be one of the worst blows the industry in Victoria has ever received.

The methods now being adopted by the Department of Agriculture point to a speedy eradication of the abominable pest.

The possibility of fruit fly infection in the Murray Valley has long been recognised by the Department of Agriculture, and it is a matter for regret that a cheeseparing financial policy was adopted in the prosperous State of Victoria. The expenditure necessary to provide additional inspectors would have been well worth while.

Even now there are many districts needing more inspectors.

The Science Branch is starved. Field officers should be appointed to conduct practical scientific operations and experiments in various parts of the State.

Research work with a view to controlling the Rutherglen Bug is urgently called for.

The Insectarium at Melbourne is a toy affair: the fumigation chamber is hopelessly inadequate and out of date.

The consolidation under one head of the departmental activities relating to Horticulture is a good step, though belated. It is to be hoped that a bold progressive policy will now be undertaken.

The horticultural industries are of immense value to the State, and public opinion is behind all level-headed progressive movements to foster them.

Without being carping, it should be stated that had the energy recently displayed in pushing the theoretical "pre-cooling" proposals, and the earlier attempts to establish a Government export department, been directed into scientific research, and the prevention or eradication of orchard pests and diseases the Department would have stood higher in the estimation of the growers and the public.

The Fruit Fly must be eradicated from Victoria. It will be eradicated. And although the lesson is a hard one, it will not have been in vain if the potentialities of the horticultural industries are adequately recognised by the Government, and a big, bold sane policy for developing them be conceived, and speedily carried into effect.

## Canned Fruits.

## Growers Should Share in the Increased Prices being Paid to Canners.

When the prices for canned fruits were decided upon under the Federal Government's bounty scheme, it was understood that the growers were to receive stated minimum prices in proportion to the stated prices charged by the canners for the finished product.

The spirit of this arrangement is apparently not being adhered to, and meetings of fruitgrowers have been held in Victoria, at which resolutions were adopted urging that strong representations be made to the Federal authorities to secure proportionate increases for the growers.

Fruitgrowers request that the following clause be inserted in the canners' contracts:—

"That every increase in price list 'from original' be divided between grower and canner."

In support of this the growers state their case thus:—

The only reason for any increase in price would be through shortage of pack for sale, owing to partial failure of growers' crops as a result of the ravages of the Rutherglen Fly.

The damage done by the Rutherglen Fly cannot be estimated before the fruit is picked, and, in some cases, processed, but it is certainly great.

The grower is faced with a smaller crop, and largely increased expense in sorting it to canning quality. His only hope is that portion of the resultant higher market value of his product be returned to him. He asks nothing from the Government except that the fulfilment of its promise, "that the Bounty Scheme is for the benefit of the grower."

He asks nothing from the canner, who accepted the bounty scheme with its price list, except that where growers' misfortunes make higher prices probable that a portion of any increase be passed back to the grower to help repay him for his misfortune.

\* \* \*

Fruitgrowers at Kyabram and Ardmona received an unsatisfactory reply from the Acting Prime Minister in response to their request for a half share of any increase in the price of canned fruits.

**Opposition to A.D.F.A.**—Thirteen Adelaide firms, outside the organisation of the Australian Dried Fruits Association, have amalgamated to conduct an organisation in competition with the A.D.F.A.

**Held Over.**—Letter from G. H. Pritchard, Secretary, Australian Sugar Producers' Association,

# A Transit Rot of Soft Fruits.

ORCHARD SANITATION AND CLEAN RAILWAY TRUCKS  
ARE NECESSARY TO DEFEAT THE FUNGUS.

By C. C. Brittlebank, Plant Pathologist, and D. B. Adam, B.Agr.Sc.

MANY GROWERS of canning Peaches in the Goulburn Valley have suffered losses of good fruit from the ravages of a "soft rot" affecting fruit during its despatch to metropolitan canneries. The cause of this rot is the fungus *Rhizopus nigricans* Ehrbg. This fungus is not parasitic, at least in the same sense that the "brown rot" organism *Sclerotinia cinerea* is a parasite, since the former very rarely attacks fruit on the tree. It, however, develops with extraordinary rapidity under transit conditions where the warm moist conditions found in a fruit-truck are very favorable to its development. A case of fruit may leave the grower in sound condition, but before processing, 70 per cent. or more may have become worthless. Seeing that fruit is rarely affected before packing, and that the chances of

with bluestone solution (2 lbs. to 40 gallons).

(3) Any scraps of old fruit lying about should be picked up and burnt; these pieces may be densely covered with black pin-head shaped spore-bodies, the spores of which, unless destroyed would carry the disease on.

The above methods pursued by a Valley grower last season met with remarkably good results, a complete arrest of the disease having been effected. In fact, the grower estimated that had he applied the remedy at the beginning of the season he would have saved £1,500.—("Fruit World," June, 1923.)

Finally, this fungus has an equally bad effect on Apricots and Pears, which either in the green or ripe state have the same susceptibility as Peaches.

metropolitan factories or displayed for sale in the markets.

Whilst orchard sanitation must be practised, as set out in the Department's circular, it is still possible for the fruit to be attacked because of the presence of the fungus in railway trucks.

Railway trucks should be sprayed with Bordeaux Mixture at the same strength as recommended for spraying shed interiors.

Fruitgrowers who are suffering losses this season, have expressed themselves very strongly on this subject, and it is hoped that by our drawing attention to the matter in this way the necessary action will be taken to cleanse the railway trucks.

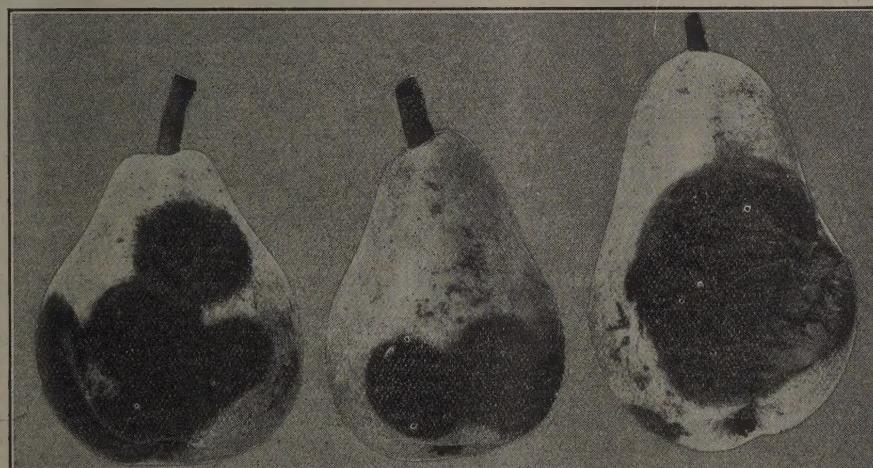
## EXPORT OF BLACK SPOT APPLES.

Vigorous Protest by Victorian Government.

Speaking at Croydon, Vic., on February 7, Hon. M. E. Wettenhall, M.L.A., Hon. Minister in charge fruit industry, strongly deprecated the idea

### PEARS SHOWING TRANSIT SOFT ROT.

Fruit in this condition standing at normal summer temperatures may be completely broken down in two or three days.



each or any fruit carrying spores of this fungus are small, a method of control is indicated. This necessary method is summed up in a word—Sanitation.

### Control.

(1) Since cases for factory use are used over and over again, the first precaution necessary is to sterilize all cases before use. This may be effected by submerging them for from one to three minutes in water kept boiling by continuous stem-injections.

(2) The shed-interior and all wood-work, lorries, etc., should be sprayed

The foregoing timely statement has been issued by the Victorian Department of Agriculture.

One subject, however, is not touched upon, and that is the matter of cleansing the railway trucks.

That is a prolific source of infection.

This is a matter for Departmental action, and no outside pressure should be necessary.

The case is a clear one. Growers with perfectly clean fruit are suffering losses this season because the fruit is attacked by this virulent transit disease between the time of packing on the orchard, and delivery at the

of Tasmania shipping 450,000 cases of Black Spot Apples this season.

It should not be allowed. He hoped that the Customs Department would refuse to allow them to leave the country.

The Victorian Government had taken definite action in the matter, and had entered an emphatic protest to the Federal authorities.

If the Black Spot Apples were allowed to be shipped, growers could have the definite assurance that the Victorian Government had done its utmost to prevent the export of the inferior fruit.

# TASMANIA

## CROP REPORTS : GRADING REGULATIONS ITEMS OF INTEREST

(By Our Correspondent.)

**A**LTHOUGH THE WEATHER is unseasonal and cold, conditions have much improved, and many fine days are being experienced.

**Apples.**—The early varieties are now ripening; export to Interstate markets commenced on February 11th, with W.P.M., Gravenstein, William's Favourite. The first overseas vessel to load Tasmanian fruit at Hobart was the s.s. "Medic" on February 18th, the whole of this cargo is consigned to Liverpool.

**Pears.**—These are generally much cleaner than other fruits, and fair crops will be harvested. A good proportion of this fruit will be exported overseas this season, more particularly the later keeping dessert varieties.

**Apricots.**—On the whole, the production was above the average in former years. The fruit was of good quality and size.

During the season the dehydration, canning, and preserving plants were working to their full capacity, but owing to the shortage of labour, could not cope with supplies, one firm having to destroy a large quantity of fruit.

**Small Fruits.**—These have now all been harvested, being either pulped or put into preserves. The yield this season will be below a normal crop; the cold wet weather seriously interfered with picking, retarded ripening, and spoilt a fair proportion of the crop.

**Standardisation.**—The State Apples and Pears Standardisation Board met previous to the opening of the export season, for consideration of grades for the year.

By a unanimous vote, the State regulations were brought into line with the Commonwealth requirements, except in the case of the fourth grade.

The old designations, "Extra Fancy," "Fancy," and "C Grade" are now superseded by "Special," "Standard" and "Plain" for both overseas and interstate export. For the fourth grade the Board are retaining the designation "C Grade" in place of the Customs Department "Blemished." A movement has been started to try and bring about a uniform system of branding for both overseas and interstate export amongst all the producing States.

This would be of great benefit to the producer, who is worried with different requirements for nearly every market to which his fruit is forwarded.

Any scheme to ensure for the minimum amount of branding to appear on any case of fruit for export, and such branding to be in accordance with requirements of all markets, should have the support of all connected with the industry.

**Timber Reservation for Fruit Cases.**—At the request of fruitgrowers' associations in the different districts, the Hon. the Minister of Agriculture (Mr. J. H. Belton) is going into the matter of reserving timber areas accessible for future fruit case requirements.

This matter has often been discussed, but no action has been taken to give effect to fruitgrowers' requests.

The value of the fruit industry to the State makes it imperative that the supply of containers be assured for future needs. These areas should be as near as possible to the fruit-growing centres.

**State Fruit Advisory Board.**—A meeting of the Board was held at Hobart on January 22nd. Present:—A Davies (Chairman), J. P. Pigott, M.H.A., Neil Campbell, M.H.A., D. C. H. Calvert, V. J. Skinner, T. J. Eddington, B. J. Pearsall, F. Heyward, F. Walker, Sir H. Jones, the Secretary, Mr. P. H. Thomas. Mr. E. H. Thompson was present ex officio.

**Overseas Fruit Export Standards.**—The Chairman and members of the delegation reported to the meeting the action that had been taken in interviewing the Hon. Minister of Customs with a view to effecting an amelioration of the new regulations governing "overseas export." The delegation were promised that Tasmania's case would receive every consideration, and that an adjustment would be made to meet the abnormal seasonal conditions.

Mr. Pigott moved, and Sir H. Jones seconded:

"That the Board convey to the delegates the appreciation and approval of members in the action taken on behalf of the industry." Carried.

Mr. F. Walker moved, Mr. Heyward seconded:

"That the Secretary be instructed to write to the National Fruit Association in London detailing the extent of fruit crops and conditions experienced this season in respect to blemished fruit." Carried.

**Fruit Carriage Investigation.**—The Secretary reported that a cable had been received from London from the Agent-General notifying the Board that the Cambridge University had approved of the installation of the Wakefield carbon di-oxide testing apparatus in vessels this season in continuance of the investigation in the carriage of fruit. The sum of £50 was required by the shipping companies toward the cost of installation.

Mr. Pearsall moved, Mr. Calvert seconded:

"That as the installation of the apparatus designed by Mr. Wakefield is a continuance of evidence to prove that bad carriage of fruit was existent, and was inaugurated under the Defence Fund, an amount of £50 be

used to instal the apparatus. Carried.

Mr. Eddington moved, Mr. Heyward seconded:

"That it be an instruction from this Board that £50 be paid from the fund for the purposes outlined." Carried.

**Advertising Fruit on Overseas Markets.**—A letter was read from Messrs. Jones & Co. conveying an intimation from the National Fruit Association, London, declining to contribute toward the cost of advertising propaganda in selling fruit "overseas."

Mr. Eddington moved, Mr. Pearsall seconded:

"That the Association be requested not to make any deduction from account sales this coming season for advertising purposes." Carried.

**Commonwealth Shipping Line.**—A letter was read from the Secretary of the Commonwealth Shipping Line, notifying the Board that in accordance with their request, no chambers loaded with fruit at Hobart would be opened to receive other consignments after leaving the port.

It was unanimously resolved that a letter conveying the appreciation of this action should be forwarded to the manager of the Commonwealth Shipping Line.

**Export Levy.**—The Secretary notified the meeting that the Crown Solicitor had expressed an opinion that this could not be carried out in the manner suggested by the Board.

Mr. Pigott moved, Mr. Heyward seconded:

"That owing to the conditions operating in the industry this season, this Board does not recommend that the matter be proceeded with." Carried.

**Dried Fruits Regulations.**—The Secretary informed the meeting that the Apple driers request the elimination of the regulation imposing wire strapping of 28 lb. hardwood boxes of dried Apples had been refused by the Customs authorities.

Mr. Pigott moved, Sir H. Jones seconded:

"That the Secretary write to the National Fruit Association (London) requesting their recommendations in regard to this matter, and that such communication be forwarded through Sir H. Jones." Carried.

**Black Spot.**—A discussion took place in regard to the occurrence and efficiency of control measures in regard to this disease.

The Fruit Expert reported to the meeting that the officers of the Fruit Division were making a thorough investigation in all districts this season from the commencement of infection, especially from the viewpoints of location, drainage and period of spray application.

Mr. Heyward moved, Mr. Calvert seconded:

"That the State Parliament be requested to vote a sum of money sufficient to make an exhaustive investigation into the occurrence of the disease, and the performance of necessary experimental work by officers of the Fruit Division." Carried.

## Australian Fruit in England.

### Report of a Meeting of English Fruit Importers held at London.

A meeting of importers of Australian fruit was held in London on November 20th, when many important matters relating to the trade were discussed.

There were present:—Messrs. Walter Greenwood (Keeling & Hunt) in the chair; F. Booth (Dominion Producers' Agency), F. C. Bradley (F. C. Bradley & Sons Ltd.), James Bradnum, W. F. Burton (Dennis & Cooper Ltd.), F. Capell and F. E. Pearce (Overseas Farmers Co-op. Federation), G. L. Curtis (New South Wales), G. Da Costa, E. Glover (Glover Hill & Co.), W. Gosling (Jefferson & Gosling), J. Hall (Ed. Jacobs & Sons), D. C. Hamilton (L. Connolly & Co.), S. Hawkins (T. J. Poupart Ltd.), M. H. Hovelt (G. E. Hudson & Son), C. J. Ivens (Margetson & Co. Ltd.), J. Jacobs (Garcia & Co. Ltd.), C. H. Lewis (E. H. Lewis & Sons Ltd.), W. Lindsey-Forbes (E. A. O'Kelly & Co.), P. Mack (M. & W. Mack), H. Metcalfe (Nothard, Lowe & Wills), F. W. J. Moore (F. W. Moore & Co. and W. D. Peacock & Co.), R. Nicholls (Barney Springer), A. Parkin (J. Adam Son & Co.), E. Phillipot (T. Walton, London, Ltd.), F. R. Ridley (Ridley & Houlding), J. R. Vail (S. Larkinson Ltd.), H. F. Wakfer (Dominion Products Ltd.), F. White (Victoria), C. Wray (Humber Fruit Brokers Ltd.), and the Secretary.

Apologies were received from Messrs. A. H. Ashbolt (Tasmania) and Geo. Monro Ltd.

**Propaganda.**—Secretary submitted a financial statement for the advertising campaign of 1922 and 1923, showing levy received £6,306/17/9, and expenditure on posters and newspapers advertising, £5,996/19/8, leaving a balance unexpended of £309/18/1. No amount had been charged in these accounts for postage, stationery, rent, salaries and other general office expenses. He estimated that the proper proportion of these expenses would be £150 for 1922, and £250 for 1923, but the Propaganda Board authorised him to offer to accept the balance in hand in complete settlement for the two years.

Mr. Moore moved that the balance be allocated to general office expenses, as suggested, and in doing so expressed the view that it was a very reasonable charge for the work performed by the Federation in organising the campaign. Mr. Wray seconded, and the motion was carried.

The Conference then proceeded to consider arrangements for next year's campaign, and a proposal that the amount of the levy should be increased to one penny per package was discussed.

Mr. Moore mentioned that he had been in communication with Sir Henry Jones on this point, and he read a cable from him suggesting that both growers and importers should contribute one half-penny per case.

Mr. Ridley proposed that the levy should be continued next year on the same basis as before, namely, one half-penny per package, to be deducted from the account-sales. This was seconded by Mr. Lewis and carried unanimously.

The Secretary pointed out that last season some firms deducted the levy from all fruits, including Grapes and Oranges, while others only deducted for Apples and Pears, and he suggested that it should be definitely decided what fruits were to be converted next season. Grapes and Oranges were a comparatively small quantity, and the levy on these alone would not provide sufficient money for separate advertising, but as these were on the market at the same time as the South African Oranges, a joint campaign might be arranged for the two.

On the proposition of Mr. Moore, it was decided that all fruits from Australasia be included in the levy next season, subject to an agreement being made with the South African trade for a joint advertising campaign. The Secretary reported, as a matter of interest, that the total circulation of the newspaper advertisements this season was over 37 million.

**Sound Values.**—Messrs. F. C. Danson & Co. wrote asking to be furnished with a schedule of sound values for West Australian Oranges ex the "Moreton Bay," and after comparing prices, Secretary was instructed to put forward as sound values  $\frac{1}{4}$  bushel cases, 12/-; bushels, 16/-; 1 1/3 bushel, 21/-; 1 1/2 bushels, 24/-.

**Shipping Numbers.**—Secretary read letters from the Australasian Refrigerated Tonnage Committee and the Port of London Authority expressing the view that the adoption of shipping numbers had been of great benefit to all concerned, and hoping that the system would be universally adopted next season. On the proposition of Mr. Moore, seconded by Mr. Pearce, it was unanimously decided to continue the system next season, and Secretary was instructed to issue up to date lists of the numbers allotted to Dock Authorities and Shipping Companies, and ask the latter to bring the list to the notice of the Australasian Ports.

**Claims on s.s. "Leitrim" and "Port Campbell."**—Mr. Greenwood reported that Mr. Moore and he had had a number of conferences with the Solicitors, Messrs. Parker, Garrett & Co., with regard to these claims, and they had come to the conclusion that as a similar action was pending with regard to the s.s. "Northumberland" the best course would be to await the result of this case before taking legal action.

The Conference agreed with this proposal. The Secretary brought forward an application from Mr. P. W. Heyman, of Copenhagen, that his claims should be included with the others. The Conference came to the conclusion that this would be impossible unless these Apples were surveyed in London before they were re-shipped to Copenhagen, as there would be no evidence of condition on discharge by the "Port Campbell."

**Handling Charges.**—A communication was read from the Tasmanian Department of Agriculture, conveying a resolution passed by the State Fruit Advisory Board asking for a close investigation of the consolidated charges with a view to reduction. In the course of discussion, it was pointed out that the charges on Australasian fruit were already considerably below the charges on other fruits, and it was finally left to the Chairman and Secretary to draft a suitable reply on these lines.

The question of freight was raised, and the view was expressed that another deputation should wait on the companies to ask for a reduction of freight for next season.

**Brown Heart.**—A letter was read from Messrs. F. W. Moore & Co. with regard to the further investigation of "Brown Heart" by the Cambridge Scientists next season. After discussion the Secretary was instructed to write to Mr. Bruce, the Australian Prime Minister, asking whether the Australian Government were prepared to make a grant towards the cost.

**Roads from the London Docks.**—Reference was made to the meeting convened by the London Chamber of Commerce at which a resolution was passed calling on the Government to take steps to improve the road communications with the London Docks. Attention was called to the grave congestion which resulted in very considerable delay so that lorries were only able to do one journey a day, whereas they should be able to do three journeys. The Chairman promised to go into the matter and write to the Ministry of Transport in support of the request for improved roads.

**Allowance for Coopered Boxes.**—Mr. Gosling asked whether anything could be done to secure standard allowances for coopered and re-packed cases of Australian fruit, as had been arranged for the American Traffic. Secretary was instructed to obtain full particulars of the agreement with the Atlantic Conference on this point.

The meeting then terminated.

The foregoing report was received per courtesy of the N.S.W. Department of Agriculture, who direct attention to the importance of the paragraph relating to shipping numbers, and the fact that the Conference decided to continue the system.

## Answers to Correspondents.

APRICOTS : VINES : DRYING RACKS : MANURING  
CITRUS CULTURE : APPLE MILDEW ETC.

*Queries by Fruit World readers will be gladly answered in these columns.*

Several questions relating to orchard practice were dealt with in the form of a Question Box at a fruit-growers' meeting at Light's Pass, South Australia, as reported in the S.A. "Journal of Agriculture." As the items are of general interest, we publish them hereunder:

**Does it pay to summer prune Apricots?**

**Answer.**—The general opinion of the meeting was that summer pruning of Apricots was a payable proposition. Mr. B. Boehm quoted instances of the results of summer pruning in his orchard and the increased crop that had been obtained from trees that had been summer pruned. Summer pruning, it was also asserted, assisted in checking black-bud.

**Is it advisable to graft Apricots on to Plum stock?**

**Answer.**—Mr. Robin cited the case of his own garden, where just as good a crop was obtained from Apricots on Plum stock as from those on any other stock. He said that the Plum stocks produced profitable crops in wet ground.

**Apricot trees dying.**—What killed so many Apricots this year—moisture in the air or in the ground?

**Answer.**—Members were unanimous in the assertion that the excessive flooding of the gardens by continual rain drowned the trees.

**Spray Spreaders.**—Is it advisable to use a spreader with arsenate of lead sprays, and is soap the best agent for the purpose?

**Answer.**—The opinion was expressed that it was advisable to use a spreader, but not soap, because it was too expensive. Casein answered the purpose just as well, and could be obtained from firms selling sprays.

**The Starling Curse.**—Can anything be done to combat the starling pest?

**Answer.**—One suggestion was to fix a poll tax on starling, and ask the district council to give so much a head for each bird. Another suggestion was to catch the birds in their roosting places and destroy them.

**Hay Crops.**—What cereal would you recommend sowing as a hay crop in this district?"

**Answer.**—Mr. F. W. Boehm, supported by Messrs. E. Polst and S. Ellis, said that a mixture of oats and wheat was the best crop, and advised cutting when the crop showed a greenish yellow color.

**Cincturing Vines.**—Which is the better way to cincture four-year-old Currant vines strongly grown; should just a ring be cut, or a piece taken right out of the stem?

**Answer.**—The general opinion was that if the vines were strongly grown it would not hurt them to cut a piece out; but care should be taken not to cut the wood of the vine.

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A similar Question Box was conducted at Moorook, River Murray, S. Australia, the details being as follows:

**Lucerne between vines?** Is lucerne growing between the rows of young vines detrimental to the vines?

**Answer.**—It was considered that although the lucerne might check hot winds and drift, the benefits gained were more than counterbalanced by the loss of vigor of the vines in subsequent years.

**Cultivation after Watering.**—Is cultivating the furrows after watering as good as ploughing in?

**Answer.**—After a good discussion it was decided that the best method would depend upon conditions. Should the ground be loose and friable to a greater depth than the bottom of the furrows, the cultivator would do the work satisfactorily; but if the land had a tendency to "hard pan," then it was necessary to use the plough.

**Drying Racks.**—Should a drying rack have an iron roof?

**Answer.**—In the opinion of those present an iron roof was of no advantage to a rack in this district. Mr. S. Sanders had only experienced one very bad season, and in that instance the fruit under the iron roof suffered as much as that on the open rack, owing to the humid conditions.

**Manuring Vines.**—How much superphosphate should vines in full bearing receive annually?

**Answer.**—It was thought that from 2 cwts. to 3 cwts. of super used in conjunction with other fertilisers and green manure would be sufficient to keep the vines in good heart; but super alone could not be relied upon to produce good crops.

**Trellising Sultanas.**—What is the best method of trellising Sultanas?

**Answer.**—Though some growers obtained good results from the two-wire system, it was generally considered that the three wires on a flat trellis would produce the best crops. The bottom wire should be 2 ft. 3 in. from the ground, the second wire 6 in. above that, and the top wire 9 in. above the second. The vine should be

trained on the middle wire, and some of the canes depressed to the bottom wire. The top wire had only to support the summer growth. Mr. Gray was strongly in favor of that system, contending that it was not necessary to leave so many spurs as with the two-wire system, and also the vines showed a much better burst.

**Citrus Culture.**—G. E. S., Barham, River Murray, N.S.W., 26/1/24, write:—We have fifty acres of bearing citrus trees. Some of the oldest trees about 10 to 12 years are showing signs of needing manure. We are anxious to get right at it. Our country is not sandy loam like Mildura, Nyah and most other districts, but the greyish-black river silt. We are on the Murray.

We think to use Sulphate of Ammonia, Potash and Phosphoric Acid—perhaps lime also. Is it better to use these manures straight out, or else, the blood and bone and others, or would you recommend No. 1 complete manure? Please advise us on the subject, particularly what to use, quantities and methods, and time of application. Is now a suitable time to manure?

Re the question of using the three essentials separately or as a complete manure. We are inclined to think that by buying Sulphate of Potash, Sulphate of Ammonia, and superphosphate as separate manures, we will pay more per acre to manure, but we will get much greater percentages of the manures than is given in the No. 1 complete manure. We would like your advice on this subject.

Any information at all on this subject will be most helpful. We have the "Culture of Citrus Fruits," by F. R. Arndt. Can we follow this on our ground. The older trees are not showing the growth or crops like the younger trees. We expect it is manure that is wanted, or would it be water? This year, we are watering about once every three weeks on big trees, and they look a bit better, but would like to hear from you on the subject.

**Answer** (by C. G. Savage, Deputy Horticultural Instructor, and Manager Government Experimental Orchard, Berri, River Murray, S. Australia.)

Not being personally acquainted with the district of Barham, I am at a loss to advise definitely what line of action should be followed consequently I can only reply in general terms to the points raised.

The unhealthy appearance of the Orange trees may be due to several reasons, such as unsuitable soil, faulty under-drainage and overwatering, or the need of food materials.

Oranges require a deep, rich and fairly free soil, and should anything cause a hard pan to form below the surface of the soil, the trees will soon show signs of distress. Hard pan may be broken up by deep ploughing and subsoiling.

If the land is very stiff the mechanical condition of the soil may be improved by the addition of lime or gypsum. In addition to improving the condition of the soil, lime and gypsum tend to render available potash that may be held in an unavailable condition in the land.

Both lime and gypsum should be spread over the soil in early autumn and left, the winter rains will tend to carry these "soil correctors" down to the subsoil. The dressings should be in the neighbourhood of 2 tons per acre.

By improving the mechanical condition of the soil cultivation operations are made easier, and moisture is more readily retained in the land.

The citrus grove should not need to be irrigated every three weeks; this appears to me to be excessive, and likely to cause seepage troubles, especially if the under-drainage be faulty.

With a thorough cultivation system the grove should carry on for at least six weeks between irrigation under normal conditions. One must hark back to the slogan, "The minimum of water and the maximum of cultivation."

In many of our Murray valley lands the soils are deficient in organic matter, consequently in nitrogen. Trees requiring nitrogen are always more or less sickly yellow in color.

The cheapest means of applying organic matter and nitrogen is by the growing and ploughing under of leguminous cover crops. The seed should be sown in early autumn, say, about March; the field pea and the horse or tick bean being the most common crops grown in the Murray areas for green manuring.

The plants should be ploughed under when they have reached their maximum of growth, and are still succulent, this is when they are in full bloom.

Peas and Beans, sown in March, should be ready to turn under in July. Sow the seed at the rate of 1 bushel per acre, together with 2 to 3 cwt. of superphosphate or bone dust.

Citrus respond to liberal applications of fertilisers, especially those containing a high percentage of nitrogen. Complete fertilisers give the best returns, and growers are advised to mix the fertilisers themselves, as one can apply the right proportion of each material. I cannot recommend any definite quantities, as each grower must find out, to a large extent, the requirements of his particular plantation. The following combination of fertiliser would be a good basis to commence testing by, the quantities of each constituent being raised or lowered to suit local conditions:

3 cwt. superphosphate per acre.

$\frac{3}{4}$  cwt. sulphate potash per acre.

2 to 3 cwt. sulphate ammonia or nitrate of soda per acre.

It is advantageous to apply these fertilisers to the citrus trees in half quantities, say half in early spring and half in early autumn, just prior to time the trees are putting on new growth.

If the under-drainage of the soil be defective, the trouble should be rectified by laying down series of underground drains.

With reference to F. R. Arndt's book, "The Culture of Citrus Fruits," I have no hesitation in recommending it, and one can follow the principles laid down therein with every confidence. It should be remembered that the book was written for the mid-Murray irrigation areas, consequently some of the practices may need to be varied in other centres.

**Gummossis: Sorrel.** Subscriber, Echuca, asks:—

(1) What is the cause of "Gumming" of stone fruit and Almonds? I notice it on some of my Peaches and on the shells of some Almonds. What is the remedy?

(2) Is a dressing of lime effective in exterminating "Sorrel?"

(3) Is there an instrument called a "Pressure Tester" procurable in Australia? According to an article in the "Country Gentleman," about "When to Pick Pears," this instrument is mentioned as follows:—

"A Pressure Tester has been perfected and the pounds of pressure required to force a steel plunger a quarter of an inch in diameter through the skin and into the Pear is the indication of maturity."

Answer (by C. G. Savage, Berri, River Murray, S. Australia):—

1. "Gumming" or Gummossis. This trouble appears to be met with in many countries, but the cause seems to be somewhat obscure. In many instances it is brought about by conditions that are unfavourable to thrifty growth of the tree. Unsuitable soil conditions, such as lack of some essential plant food, or defective under-drainage and the consequent water logging of the land. Unsuitable root stocks may also influence the growth and cause the development of gum pockets in the tissues of the tree.

Some investigators claim to have identified a fungus which also causes the disease.

The treatment should be to rectify, as far as possible, the faulty soil conditions if such exist. Cut away all diseased wood into clean tissue, and paint the wounds with Bordeaux paste made on the following formula—1 lb. bluestone, 2 lb. fresh lime,  $\frac{1}{2}$  gallons water.

Dissolve the bluestone in 1 gallon of water, and slack the lime in  $\frac{1}{2}$  gallon. Pour together and stir well.

2. Sorrel usually is a sign that the soil on which it is growing is deficient in lime. Dressings of lime will tend to sweeten the land, and as the land improves the sorrel will diminish.

3. I am unable to say if a "Pressure Tester" for gauging the maturity point as an indication when to pick Pears is obtainable in Australia.

## THE POWDERY MILDEW OF THE APPLE.

### Podosphaera Oxyacantha.

#### Methods of Control.

A.T., Scottsdale, Tasmania, writes 16/1/24:—

Could you advise me as to the most effective way of destroying the Powdery Mildew or fire blight. What are the most effective remedies, also when to apply them?

Would an application of Sulphate of Iron in conjunction with Lime-Sulphur of winter strength be effective, put on prior to the first spraying for Black Spot, just before the buds open?

On this subject, Mr. P. H. Thomas, Tasmanian Government Fruit Expert, gives information as follows:—

The spread of the fungus disease, "Powdery Mildew," throughout the fruit districts of the State during the past seasons has increased, and the consequent damage to trees in areas affected has been large.

Certain varieties of Apples have shown themselves very susceptible to the fungus, the leaves, fruit, buds, etc., in numerous cases being damaged to the extent of almost total defoliation. This has undermined the health and vigour of the tree, and restricted its growth and productiveness.

There are many species of mildew of the "white" or "Powdery" variety, and they can be found in nearly all kinds of vegetation.

Apple trees attacked by *P. oxyacantha* are first noticeable by the condition of the young shoots and fruit buds in the early spring. These are generally distorted and covered with a whitish powder, the disease being much more marked in the case of light laterals that have been left unshorn and are putting forth new terminal growth.

As the season progresses the affected portions will die, turning a brownish black in colour, and giving the appearance of having been scorched.

It is through this form that the disease in a lot of districts has received the misnomer of "Fire Blight." The latter is very different from powdery mildew.

Although the mildew has done a great deal of damage, it is not of such an insidious nature as the dreaded fire blight (*Bacillus amylovorus*), which has caused widespread ruin in the States of America.

Although the fungus may be found on most of the varieties of commercial Apples that are grown, there are a few kinds which suffer to a greater extent than others. Cleopatra, Cox's

March 1, 1924.

Orange Pippin, Jonathan, and French Crab are amongst the most susceptible.

Plant pathologists have been experimenting for a number of years with various preparations of fungicides in order to combat the disease, and a certain amount of success has been experienced. Sulphur dusted on in the dry fine form has long been recognised as one of the best treatments for most of the mildews. Young trees are treated by use of a pair of sulphur bellows in the early morning whilst the dew is upon the trees.

During the last few years a commercial preparation known as atomic sulphur has been used with good results. Atomic sulphur is practically finely divided flowers of sulphur treated so that the particles are held in suspension in liquid form, so that they can be applied with an efficient spray pump.

Lime sulphur and iron sulphide mixture will also control the spread of the disease.

The latter mixture is made by dissolving about 3 lbs. of sulphate of iron crystals in five gallons of water, the solution being stirred into a mixture of lime and sulphur at the strength of 1 gallon of concentrate to 45 gallons of water.

The resultant mixture will be black in colour, and have a precipitate that will very soon settle to the bottom of the vessel. If this spray is used, it will be necessary to keep it well mixed, otherwise a very uneven application will result.

The first spray should be applied when the buds commence to unfold, and should be followed by successive sprayings, according to the condition of the trees.

During the pruning operations, a small bag or satchel should be carried, in which all affected growths should be placed to be burnt as soon as a quantity has been gathered.

If the disease is to be combated with any success, concerted effort will be necessary.

The conidiospores are produced in very profuse numbers, and are disseminated by the wind and other agents over a large area. They are capable of germination upon reaching a suitable host plant.

By this it will be seen that one or two untended areas in a district may reinfect orchards that have been practically cleansed.

Mr. J. M. Ward, Superintendent of Horticulture for Victoria, in reply to an inquiry on this subject, states:—

The best spray mixtures I know of for coping with powdery mildew of the Apple are Atomic-sulphur, and Iron Sulphide. The latter is made by mixing 1 gallon lime sulphur, 3 lbs sulphate of iron, and 50 gallons water.

This mixture can be used in conjunction with arsenate of lead, and can be applied—if correctly made—at any time of the year without injury to the foliage.

The best time to apply this spray is during the spring, either just before or just after the fruit has set, to be followed with a second and a third application at two or three weeks' interval.

The same remarks also apply to Atomic Sulphur. The use of this, however, is a little more costly than the iron sulphide; but both are equally as effective.

If your reader will follow out the above direction, he will find he will practically eradicate the powdery mildew from his orchard, as has been proved by Tasmanian Departmental officers in the district in question. Thoroughness of application is most important.

#### STOCKS FOR APPLE TREES.

To the Editor of "The Fruit World."

"Sir,—The question of stocks for Apple trees dealt with in your January issue, to my mind, is one of the most important problems exercising the minds of growers to-day. This most serious matter has been tinkered with too long. Some authorities recommend the present method of propagating Apple stocks, while an increasing number are advocating the use of the Seedling stock. This discussion has been going on for many years, and we appear to be no nearer a solution of the difficulty. Undoubtedly there are large numbers of orchards on the Northern Spy stock doing well, and, on the other hand, there is a number on the seedling stocks doing equally as well, and in some districts, much better. My own opinion is that the 'seedling stock' tree gives larger returns, and will outlive the trees propagated by the modern method.

"I have read with interest the letters in your last issue on this subject, and I notice that all your correspondents agree that an investigation should be proceeded with. This unanimous opinion should be translated into action without delay in order that this important matter may be definitely settled.

"I suggest that each State Government should establish experimental orchards, and nurseries to thoroughly try out both methods. If this is properly carried out, and the officers in charge have the opportunity to visit each other's orchards, such a procedure could not fail to be productive of much good.

"I understand that in New Zealand, about 1912, a very large quantity of trees imported from Australia were condemned by the N.Z. authorities. The defect was described as root knot. Was this due to the faulty method of propagation?—Yours faithfully,

"ANXIOUS."

Applethorpe, Queensland.

1/2/24.

"Convinced That Northern Spy is Best."

Stanthorpe, Q., 1/2/24.

Dear Sir—I received my copy of "The Fruit World," and am well pleased with same. Your article on "Apples on Northern Spy Stock" was just the thing. As I am planting Apples this coming season, I was in doubt which stocks to choose, but your paper has convinced me to get Northern Spy stock, so I have benefited from my first copy. As the information is good, I will become a regular subscriber to your most valuable paper to the fruitgrower.—I remain, yours sincerely.

J. E. F.

In this connection, it is worth quoting a letter received from Mr. P. V. Kerr, a much travelled and experienced horticulturist. Mr. Kerr writes to the "Fruit World" as follows:—

"Would only plant Blight Proof Stocks."

"During my tour of the Western States of U.S.A., I paid particular attention to the question of stocks. All American Apple trees are propagated on seedling stocks, the pips being mainly imported from France. The trees make vigorous growth, and I saw many orchards in which the trees had grown to enormous dimensions. Unfortunately, there are no trees on either Northern Spy or Winter Majetin stocks for comparative purposes, but it must be remembered that orchardists in U.S.A. are selecting the best land for fruit culture, and that nearly all the areas are irrigated.

There is just as much lack of uniform growth in American trees as in those in Australia. In the Sebastopol district in California, where 7,000 acres are devoted to the growing of Gravensteins, the twisting peculiar to this variety was noticeable, although not so much so as in Australia. So that want of uniformity in growth and twisting in Gravensteins can not wholly be blamed to our blight-proof stocks.

The American grower on the Pacific coast has no concern regarding Woolly Aphis: I only saw this pest in a few isolated instances during a sojourn of eight months, and travelling from the Canadian border to Mexico. Taking into consideration the way in which Woolly Aphis thrives in this country, I would not plant a single tree for commercial purposes except on blightproof stock.

"Undoubtedly, the Northern Spy has its faults, but until something better is available, let us stick to it. There is certainly a large field for investigation on this subject of such vital importance to the fruitgrower.—Yours truly,

"P. VAL. KERR."

Mitcham, V., 12/2/24.

## Stocks for Apples and Cherries.

"Blight-proof Stocks for Apples Essential."

To the Editor, "The Fruit World."

Dear Sir,—Re the interesting discussion in the "Fruit World" about Apple Stocks, I should like to call attention to several points that have not received notice.

(1) Is the stock likely to have any relation to Bitter Pit. The unfortunate thing is that all the Blight-proof varieties seem specially subject to this malady. The three used mostly in this district for stocks are Spy, Majetin, and Magg's Seedling. The Majetin is far less subject to this complaint than the other two, and an old garden my father planted over 40 years ago spoke well for this stock. All these trees have since passed away. My trees are on Spy: they do well, but the pit has given me a fair amount of trouble. Experiments might be made along these lines.

(2) Some growers argue that as the Americans use seedling stocks and ignore the Woolly Aphis, that we could do the same, quite overlooking the fact that the severe American winter keeps this pest in check, and they can afford to ignore it, but if any grower here is foolish enough to use seedlings he will do so with disastrous results. I can remember my grandfather telling me that he started an Apple orchard (about 50 years ago) using seedlings as a stock, but the Woolly Aphis played such havoc that he had to root the trees out. Northern Spy has been blamed for the crinkle in the wood of Gravenstein, but I raised some of this variety on their own roots, and they went just the same. London Pippin is nearly blight proof, and does not pit, so that it might be worth experimenting on.

Re Cherry Stocks. Seedlings of Sweet Cherry are sometimes used here, and give a large tree, but in nearly all cases the suckers from the small Sour Cherry (I don't know the name) are used. These make a good stock, but sucker badly.

I raised some of these Sour Cherries from seed, and struck cuttings from the seedlings: They "take" freely. I also used cuttings from the suckers, but they are harder to strike.

This is a great improvement, as there is no trouble with suckers, and they make in every way a satisfactory stock. I graft them low down, and, by the way, when Apples are worked low down they frequently send out roots above the graft, which, of course, are not blight proof. I have frequently noticed this in my orchard.—Yours faithfully,

J. A. MORRIS.

Croydon, Vic., 16/2/24.

## NEW ZEALAND FRUIT TREE EMBARGO.

## An Injustice which is Unscientific and Confusing.

An unpleasant echo of the controversy relating to the prohibition of Australian fruit trees entering New Zealand, is heard in the letter appearing in this issue from a fruitgrower at Applethorpe, Queensland, dealing with the seedling stock question.

We have always insisted that the embargo on the grounds of disease is unfair and unsportsmanlike.

The alleged disease, root knot, is non-existent in Australia, and New Zealand nurserymen and fruitgrowers know it. If New Zealand desires to place a heavy duty on Australian trees or to prohibit their importation, that should rightly be a matter of Government policy, and Australia would appreciate it accordingly, and know how to adjust other tariff items accordingly.

But to exclude clean, healthy Australian trees on the grounds of disease is improper practice.

An undeserved stigma is cast on Australian grown trees, and this hurts more owing to the well-known fact that the fruitgrowing industries of both New Zealand and Australia have been built upon trees raised in Australia.

Now for the echo.

Because New Zealand unjustly prohibited Australian fruit trees, growers in Queensland are seizing on this as an argument to damage the reputation of the Northern Spy stock.

New Zealand's action is thus confusing fruitgrowers in Queensland, and is side-tracking them badly.

On the subject of the New Zealand embargo, the following letter from Mr. C. C. Brittlebank, Victorian Government Plant Pathologist, is important.

Mr. Brittlebank's reputation as a Plant Pathologist is world-wide, as he is recognised as a scientist of the first rank.

The letter is as follows:—

Sir,—In regard to the New Zealand embargo on Victorian Apple trees for Root Knot: This trouble was not "due to faulty methods of propagation." Although the New Zealand Government prohibited the importation of Victorian trees on the grounds that they were diseased, their experts have, up to the present, been unable to isolate any organism. Mr. T. W. Kirk (then N.Z. Director of Horticulture) visited Victorian orchards some years ago to ascertain the damage caused by the so-called disease, from which Victorian trees were alleged to be affected. So far, although several years have elapsed since Mr. Kirk's visit, no report has been issued for the very solid reason that no injury was observed.—Yours faithfully,

CHAS. C. BRITBLEBANK,  
Plant Pathologist. Melbourne, 8/2/24.

Doubtless the seedling stock versus Northern Spy stock controversy will run its course, and if, as the outcome, a thorough investigation is made, so much the better for all concerned, especially if a better stock than Northern Spy be discovered. This will take many years.

In the meantime, New Zealand might review this matter, and in the light of wiser counsels, take steps to have the embargo lifted—an act of justice which would be appreciated even now, though justice has been long delayed.

## "BUNCHY TOP" IN BANANAS.

By the importation of healthy corms from healthy districts, it has been demonstrated that the disease known as bunchy top is not due to a "running out" of stock. Further analysis of soil from around healthy and unhealthy plants have been made (writes the Biologist of the N.S.W. Department of Agriculture), and further manorial trials have been carried out. From them it does not appear that the disease is due to the lack of any ordinary soil constituent.

The suggestion that the disease is carried by aphides has been tested out, and while spraying plants with kerosene emulsion has kept these pests down, and has apparently to some extent minimised the amount of the disease, it has not yet brought it under control.

Timely action should be taken when infection is noted on a small scale, affected plants being completely cut out, and the holes limed and not replanted. The plants cut out should be taken well away from the plantation, and, if possible, completely destroyed by fire.

**"Burpee's Annual."**—We have received from Messrs. W. Atlee Burpee Co., Seedgrowers, of Philadelphia, U.S.A., a copy of their 1924 Annual. We must congratulate them on the excellent and attractive manner in which it is compiled. It contains over two hundred specialties illustrated and printed in the colors of nature, including colored plates for special varieties and novelties. Copies will be sent free upon request for "Burpee's Annual," No. 203, to above address.

**Y**OU need each and every case of your exported fruit perfectly ventilated and kept cool from yourself to the consumer. Pack the fruit in The Climax Patent Export Fruit Case, and you'll get it. See advertisement in "Fruit World" for January, 1924, page 55. W. Martin Green, Baxter, Vic.

# THE AUSTRALIAN CITRUS GROWER



M.C.T.

## AUSTRALIAN CITRUS GROWERS' CONFERENCE.

**A**N IMPORTANT Australian Conference of Citrus Growers was held at Melbourne on January 29-30. This Conference was convened by the Victorian Central Citrus Association Pty. Ltd.

Many subjects of vital importance were dealt with, as will be noted in the following report:

The following were present:—



Mr. Gerald Mussen, Chairman of Directors Victorian Central Citrus Association who has taken an active part in organising the Citrus growing industry.

**Victoria.**—Hon. M. E. Wettenhall, M.L.A., Assistant Minister for Agriculture and Chairman Victorian Fruit Board, Mr. G. Mussen (Tresco), Mr. S. Brentnall (Bamawm), Mr. K. A. Goodland (Mildura), Directors of V.C.C.A. Pty. Ltd., Mr. A. R. Smart (Mildura), Mr. E. L. Watmuff (Currawa), Messrs. J. H. Morton and J. A. Egan (Riverside), Mr. A. Fraser Gandie (Nyah), Mr. G. Grant (Tresco), Messrs. J. M. Jacobs and A. J. Wood (Kyabram), Mr. W. N. Cain (Madowla), Mr. Ritche Brown (Shepparton), Mr. P. R. Quick (Cobram), Mr. Rupert Watson (Perricoota), Mr. A. L. Weymouth (Echuca), Hon. H. Keck, representing proposed V.C.C.A. District at Elmore), Mr. J. Lindner, representing proposed V.C.C.A. District at Warby Ranges, Wangaratta; Mr. W. Branson, V.C.C.A. market representative; Mr. B. S. B. Cook, Secretary V.C.C.A. Pty. Ltd.

**New South Wales.**—Major H. R. Hallard (Manager, N.S.W. Central Citrus Association.)

**South Australia.**—Mr. J. A. Parkes (Secretary, Murray Citrus Growers' Co-operative Association.)

**Western Australia.**—Mr. F. J. Beecher (Western Australian Central Citrus Growers' Association).

### Government Officials.

Mr. J. M. Ward, Superintendent of Horticulture; Mr. S. A. Cock, Government Citriculturist; Mr. E. Meeking, Senior Exports Officer; Mr. M. J. Cannan, Outdoor Superintendent, Victorian Railways.

### Opening of Conference.

Hon. H. Keck, M.L.C., was voted to the chair.

Mr. Wettenhall opened the Conference. He hoped that, as a result of their deliberations, resolutions would be carried which would be beneficial to fruitgrowers, and extend the local and overseas markets. They would never get uniformity in packing, grading, and marketing their produce if it were left to individuals. They should take a leaf out of the book of Californian experience and establish packing sheds wherever possible. He was pleased to notice by the agenda paper of the V.C.C.A. that the number of packing sheds was being increased and he trusted that before long the whole of the citrus crop would be put through the recognised packing sheds. (A voice: "Is the Government prepared to assist in financing packing sheds?") The Government would assist those who helped themselves. There was too much running to the Government for money and sitting down without making any effort. Since he had taken office, advances to many fruitgrowing ventures had been taken as gifts and no material effort whatever made to re-pay those advances. That was not the right style of business. (Hear, hear.)

Continuing, the Minister stated the Railways Department was performing valued service to the industry. He urged that steamships should be compelled to carry self-registering

thermometers in their refrigerated holds. Regarding fumigation of citrus trees he considered the Government could legitimately help, and he would assist the growers to the limit in getting into operation a satisfactory fumigation plant. He congratulated the growers on assuming control of the marketing of their fruit: he trusted other branches of the industry would follow suit. Similar control of exported fruit was desirable.



Mr. K. A. Goodland, Mildura, one of the directors of V.C.C.A.; also Secretary of Mildura district of V.C.C.A., who is associated with many other movements in Mildura.

In welcoming the delegates from the other States, Mr. G. Mussen (Chairman of Directors of the Victorian Central Citrus Association) said that the whole movement had sprung from South Australia, which was the first State to organise. Victoria started to put its house in order two years ago, and since that time about 17 or 18 district organisations had been formed, all of which belonged to the Central Association. Their New South Wales friends had got together, and last year they had the pleasure of working co-operatively with the New South Wales Citrus Association. He trusted that that Association would progress until it could control 100 per cent. of the citrus growers in New South Wales. They had prevailed upon Mr. Parkes to go as a missionary to Western Australia,

where the growers were struggling with the difficulties of over-production and export, and as a result of Mr. Parkes' visit to that State, they had Mr. Beecher present at the Conference as the first delegate from Western Australia. (Hear, hear.)

That, continued the speaker, left only one other Orange growing State of Australia, Queensland, unaccounted for. Queensland was a place of extraordinary interest to all co-operators because the State Parliament had passed an Act under which, for three years, the sale of all fruit of all kinds was handed over absolutely to the control of a Committee of Direction comprising growers' representatives and Government representatives. That extraordinary legislation for compulsory co-operation would be carried on for three years, and citrus growers in the southern States and elsewhere, who had experienced the difficulties of the co-operative movement as a voluntary one would be very anxious to see whether that new form of legislative compulsion was going to succeed. Curiously enough, in South Africa, there was a reflex of the same movement, and in New Zealand there was a general demand from the fruitgrowers to Parliament to give them an Act which would compel co-operation and render it compulsory for the less public spirited growers to join in the movement as a whole and make their contributions to the expenses.

While in Brisbane a fortnight ago he (Mr. Mussen) had the opportunity of discussing the matter with Mr. Ranger, the President of the Queensland Fruit Committee, who had asked him to tell the Conference that his organisation covering the whole State of Queensland looked forward to co-operating fully with the Citrus Association of the other States, and that his chief interest was centred on the Melbourne marketing arrangements. He also desired to discuss with them how he could have practically the same agents and use the same marketing arrangements as the other citrus growers. That was entirely satisfactory to the V.C.C.A. and completed the Australian family of citrus growers. The Victorian citrus growers heartily welcomed the delegates from the other States in their joint discussion of how they were to control the Melbourne market.

Apart from the local markets they were satisfied that the future of the citrus industry lay necessarily in the export trade. The evidence they had of the coming increase in production was such that there was no hope of the Australian markets absorbing what would be produced. That being so the V.C.C.A. had designed a policy for export on Australian lines. They recognised no State boundaries whatever. They were an Australian industry with an Australian objective and

sought to make the Australian name the greatest in the world, either in London or elsewhere. (Hear, hear.)

With regard to Mr. Wettenhall's remarks on grading, the V.C.C.A. had deliberately established standards of their own. They maintained their own standards of export through their own officials and through their own district organisations. The result of that action was that they received a report from London that the Oranges landed in London were by far the best Oranges which England had ever seen. (Hear, hear.)

One problem which Conference had to face was how to compensate the public spirited growers, who contributed to the high grade Oranges for export, but who were faced with a loss, owing to causes beyond their control. Such growers had been engaged in attempting to open up an export market for Australian citrus from which every body was going to benefit.

#### Address by Mr. C. E. D. Meares on "Co-operative Marketing."

Mr. Meares (General Manager of the Coastal Farmers' Society Ltd.) said that he had arrived at the conclusion that the fruit industry of Australia was reaching, if it had not already reached, a very difficult position through lack of organisation and through the over production of many varieties of fruit. The primary industries of Australia were becoming more and more dependent on export. There were methods of overcoming the difficulties, the first being by getting rid of the individual and pooling their interest in regard to the establishment of packing sheds and other machinery in order to establish standardisation, and co-operation. He meant co-operation which covered the industry from the local packing sheds to the local market and to the London market. Those methods were absolutely vital to the future and without some quick movement of that nature he saw nothing but disaster ahead of a great many fruitgrowers of Australia. The citrus growers had established their market equipment and confidence amongst the whole of their members. They had a long way to go yet, however, but what others had done they could do.

When he first joined the co-operative movement the dairy farmer was making his own butter. They united for the purpose of co-operatively marketing their produce. They had the organisations of agents to compete with who had extensive experience and large capital. The result was that the pioneers of co-operation lost all their original capital and had a very difficult three or four years, but they battled on until the end of the twelfth year, when they established a very satisfactory turnover and a voice in the regulation of prices.

No matter what the growers did in regard to control of grading, packing

and organisation, unless they followed their fruit on to the market and took the same control of it there as they did at their packing sheds there was very little hope of success. He advised them not to play with co-operation but "to go into it," and if it was not what they thought it ought to be they should make it better. They should not stand off and criticise co-operation but should endeavour to develop and improve it.

A delegate: "Do you think it would be better to have a lot of agents?"

Mr. Meares said the fewer the sellers the better. The packing sheds in Tasmania had not been the success they should have been for the reason that they had not had the best management. It had to be remembered that efficient management was the cheapest. It frequently happened that the cheapest man was the dearest. Another reason for the lack of success in Tasmania was that they allowed all the different growers to nominate their own agents. The multiplicity of agents was a grave mistake. How were they going to control an army of sellers? What they wanted was a class of agent in co-operative effort that they could control. The ordinary agent in the street, whether the product was dairy produce or fruit, was not interested in the organisation. The old system suited him best and the packing sheds and all those other developments did not interest him. The only hope for the citrus growers was to help themselves. No one could help them till they did so, but they would find that when they had established themselves by their own efforts they could get all the assistance they wanted. (Applause.)

Mr. J. A. Parkes (S.A.) said that many of the large growers were of the opinion that the restriction of the number of selling agents would be a great disadvantage because it would close many avenues of distribution and he would like an expression of opinion from Mr. Meares on that point.

Mr. Meares replied that his experience had been to the contrary. He had found that where the fruit was there the buyers would be.

Mr. Brentnall asked Mr. Meares whether he favoured the system of peaceful treaty sale or sale by auction, more particularly in view of his London experience.

Mr. Meares replied that provided the Oranges were graded in such a manner that they established a reputation for reliability the auction system was the better method.

On the motion of Mr. Mussen a hearty vote of thanks was tendered to Mr. Meares for his address.

#### Secretary's Report.

The Secretary, Mr. B. S. B. Cook, presented his report for the year 1923, which was adopted.

**STATES' EXPORT QUOTA.**  
**Federal Council of Citrus Associations.**

Mr. Mussen moved:

"That it is essential in the best interests of all Australian Orange growers that the export trade be further developed on a basis that all States should export an agreed upon quota, and that all shipments sent abroad be of the highest quality, uniformly graded and packed, and sold under the registered "Kangaroo" brand, which has already established an excellent reputation on the London market."

It was his firm belief that in export they were going to find the salvation of the citrus industry. If they failed in export then hundreds of growers in every State were going to be ruined because it would be impossible for Australia to absorb the production of Oranges which they would have in ensuing years. It was the duty of all States to take their share of the exportation quota. The quota for each State would be settled by the Federal Council, on which all concerned would be represented.

Mr. Brentnall seconded.

Mr. Beecher (Western Australia) on rising was received with applause as the first Western Australian delegate to the Conference. He very much appreciated the welcome. He assured Conference that when he returned to Western Australia he would endeavour to bring the growers in that State into line with the V.C.C.A. Their experience in Western Australia with regard to export had been peculiar. Their export last year which amounted to 36,000 cases, was a colossal failure, whereas in the previous year when they were exporting in small lots success had been achieved. They recognised that export overseas was the key to the position. He entirely approved personally of the motion put forward by Mr. Mussen.

Mr. Parkes said that South Australian growers were quite prepared to live up to the export quota conditions.

The motion was carried unanimously.

**FEDERAL COUNCIL.**

Mr. Mussen moved the following series of resolutions:-

"That a Federal Council of State Citrus Associations be constituted."

"That each State Association be given equal representation on the Federal Council."

"That each State Association be asked to appoint one representative to the Federal Council."

"That the interstate representatives at this Conference be appointed to the Federal Council, problem with the right to the V.C.C.A. to select a delegate, and the right to any State Association to change its representative at any time."

"That the Federal Council act in an advisory capacity, and where

necessary, in an executive capacity, in all matters of common interest to the State Associations."

"That the Queensland Committee of Direction be invited to link up with the Federal Council, and appoint a representative."

"That the Federal Council may, as it thinks fit, conduct its business and arrive at decisions by meetings of representatives or by telegrams or letters exchanged with representatives."

Mr. Parkes seconded.

Mr. Beecher asked would the principle be adopted of pooling delegates' expenses. He pointed out that the expenses of sending delegates from Western Australia were greater than those of any other State.

This matter was referred to the Federal Council, and the motion was carried unanimously.

Mr. Mussen moved:

"That the Federal Council be asked to arrange for export, so far as possible under uniform conditions for all States, including quotas, supply of cases, wrappers, freight, space and an Insurance Fund covering shipments from all States."

Major Hallard seconded the resolution, which was carried unanimously.

**Cases, Wraps, Brands.**

A lengthy discussion then ensued in regard to the various types of cases and wraps used in connection with export trade.

Mr. S. A. Cock (Government Citriculturist) suggested that the delegates would do well to follow the example of the Californian merchants in sparing no expense in packing their fruit for export in order to ensure its attractiveness to the consumer. He had visited the Western market and inspected the Californian fruit, which was then arriving, and the excellent manner in which the Californian product was packed for export was a revelation.

Mr. Quick moved:

"That the selection of the cases for export be left in the hands of the Directors."

Mr. Brown seconded the motion, which was carried.

**Establishment of Insurance Fund.**

On the motion of Messrs. Mussen and Beecher, it was decided:

"That in view of the national work being carried out by the various State Citrus Associations in opening up permanent export markets for Oranges, the Federal Council be asked to apply to the Federal Ministry for a contribution of £10,000 towards an Interstate Insurance Fund to be used only to recoup growers their out-of-pocket expenses on shipments of Oranges arriving abroad in bad condition, the growers in all cases having to lose their fruit without compensation."

**Proposed Levy.**

On resuming, Mr. G. Grant (Tresco) moved:

"That a levy be struck on all fruit marketed, to enable the V.C.C.A. to return to growers a price equal to local market rates for all fruit exported."

The resolution did not intend that the levy was to be applied to growers who exported unsuitable fruit. The only fair and equitable way of conducting export was for everybody to contribute towards it equally. The resolution was intended to protect growers against loss for which they were not responsible.

Mr. Mussen seconded the motion pro forma.

Mr. Fraser Gandie (Nyah) said that in his experience it had been impossible to enforce such a levy as that proposed. The only remedy was to control the fruit at the packing sheds.

Mr. Brown said that he could not support the motion. In a district like Shepparton where the growers might not send their fruit through the packing sheds it would tend to drive members out of the Association if such levies as that proposed were inflicted.

Mr. Weymouth opposed the resolution because he considered that it would encourage exporters to send inferior fruit to the old country instead of their best.

Mr. Morton (Riversdale) supported the resolution. His experience of growers was that they were very willing to fall into line with such proposals, but at the same time they wanted to know to what extent they were going to be affected.

The motion was lost.

**Export Agents.**

Mr. Morton (Riverside District) asked whether it would be possible for members to send fruit to England in say 25 or 30 case lots, to be disposed of by their private agents?

Mr. Mussen said that the Directors could not favour such a course. The object was to send all the fruit away together and keep it together in order to make an effective display.

Major Hallard agreed with Mr. Mussen. His Association had taken up exactly the same attitude.

Mr. Mussen said there was no harm in sending gift cases oversea, but there were many practical difficulties in the way of sending small case lots to agents for sale.

**Referred to Council.**

The following subjects were referred to the Federal Council:-

British Agents; Trial shipments to U.S.A., Canada and Belfast; New Zealand Trade; Trade with the East; Temperatures for Export; Self-registering Thermometers.

**Empire Exhibition Arrangements.**

The Secretary was assured by all delegates that the various districts would see that a properly graded and packed supply of citrus fruits would be available for export for the purpose of the Empire Exhibition.

### Royal Agricultural Show.

The Secretary said the suggestion was recently made to him by the Secretary of the Royal Agricultural Society that the V.C.C.A. might offer a shield for perpetual competition. That would be in addition to the money prizes which the Royal Agricultural Society gave.

Mr. Cock approved of the proposed shield competition and also advocated Inter-State competitions. These would tend to improve the varieties of fruit grown and the resultant displays at the Show.

Mr. Rupért Watson (Perricoota) said on behalf of the Perricoota district he was prepared to present a shield valued at 25 guineas for district competition between citrus growers at the Royal Agricultural Show. (Loud applause.)

Mr. Brentnall moved that Mr. Rupert Watson's offer of a shield be accepted.

Mr. Weymouth seconded the motion, which was carried unanimously.

The Chairman tendered the thanks of the meeting to Mr. Watson for his generous offer.

### Packing Sheds.

Mr. Morton (Riverside) stated his district realised that the packing shed was the only place where they were going to achieve absolute standardisation.

The matter was discussed at considerable length. Mr. Brentnall moved:

"That Conference gives its support to the request from such districts as are desirous of erecting packing sheds."

The Railways Commissioners were prepared to erect packing sheds at a cost of £1,250 and to charge a rental equal to 10 per cent., and in addition, 10/- per foot of siding frontage occupied. Carried.

### Importation of Foreign Citrus Fruit.

Major Hallard urged that action should be taken with a view to the prevention of the importation of American and Italian citrus fruits. Up till quite recently there had been some justification for the importation of a fair quantity of Italian Lemons, for the reason that the local growers had not been able to supply the local market in full, but that reason no longer existed. Import had greatly increased of late. In view of the restrictions imposed by the United States Government on the importation of Australian fruits into America, Australia should take retaliatory action.

Mr. Parkes moved that the matter be referred to the incoming Federal Council.

Mr. Jacobs seconded.

The Secretary stated that the Fruit-growers' and Market Gardeners' Association of South Australia had asked the V.C.C.A. to co-operate with them in approaching the Federal Government on the matter.

Mr. Parkes remarked that the request mentioned by the Secretary referred to the Salisbury and Torrens Valley districts, which were producers of large quantities of Lemons.

The motion was carried unanimously.

The Conference adjourned until next day, and on resuming the Secretary announced that he had received the following letter from the Acting Comptroller-General of Customs:

"It is not practicable to prohibit the importation of Italian Lemons nor can the provisions of the Industries Preservation Act be applied, unless it can be shown that the fruits being exported to Australia at prices which are lower than those charged for home consumption. The matter will, however, be considered in connection with any amendment of the tariff which may be contemplated.

"There is already in force a proclamation under the Quarantine Act dealing with the importation of citrus fruits."

Major Hallard said that in spite of that letter he thought a deputation should interview the Minister for Customs in order to keep the matter prominently before him.

### Expenses.

Mr. Goodland (Mildura) moved:

"It is the opinion of the members in this district that, as the export of Oranges is not yet on a payable basis, and the whole future of the citrus movement depends on the successful exploitation of overseas markets, the V.C.C.A. should continue to do its utmost to reduce expenses in regard to export in every possible way."

He said that they had been urging growers to continue the experiment of marketing in England. Though they had got some very high prices they had also got some very low ones and export had not yet reached a payable basis. They could not hope to control the London market, and the only way to make the margin for the grower greater was by reducing expenses.

Mr. Jacobs seconded the motion.

Mr. Mussen said that the V.C.C.A. had fought strenuously for the citrus growers and had cut costs in every possible way. He ventured to say that there was not a co-operative institution in Victoria which could have done the business that the V.C.C.A. had done at such an exceptionally low cost.

The motion was carried.

### Export Proceeds.

Mr. Goodland moved:

"That, in the interests of the Association and the citrus movement generally it is desirable that growers should get their money for their export quota in much less time than they have done hitherto, and that the V.C.C.A. should consider the question of making arrangements with the firms concerned that moneys due to growers should be

either cabled or made available in Melbourne immediately after the sale of the fruits."

Mr. Mussen said that the resolution asked for something which was impossible unless they were prepared to meet the cost of lengthy cables covering the full details of all account sales.

Mr. Fraser Gandie considered that the system adopted by the V.C.C.A. should be adhered to until their experience evolved a better method.

The motion was lost.

### V.C.C.A. Representative on Federal Council.

On the motion of Mr. Watmuff (Curlwa), Mr. G. Mussen was elected representative of the V.C.C.A. on the Federal Council.

### Manufacture of By-products from Citrus Fruit.

Mr. Parkes said that in South Australia, with the assistance of a Government subsidy of £300 (the growers putting up another £300) they had engaged Dr. Pasquale from Messina, Italy, to conduct a small experimental plant for the manufacture of by-products from Lemons and Oranges. He was pleased to announce that the essential oils of Orange and Lemon which had been produced were equal to any similar products imported into Australia and superior to most. In regard to citric acid the plant required to produce at a profit would be too expensive to justify the experiment.

Major Hallard said that the efforts in the direction of profitably marketing citrus by-products in New South Wales had been continued by the Gosford By-products Company. He understood that they had been able to arrange for some very large contracts in the Malay States, but he was not in a position to say whether the business was actually completed.

### Marston Process.

Mr. Mussen described at length the negotiations on the part of the V.C.C.A. in securing the option of purchase of the Marston process of treating citrus fruits. It was the intention of the directors to continue experiments as the new fruit arrived during the coming season.

### Interstate Inspection Fees.

Mr. Ward stated that the matter was under consideration by the Department and it fully recognised the difficulties of growers. He did not think the Association would have very much to complain of when the Department's action was announced. The matter was referred to the Federal Council.

### Melbourne Marketing Arrangements.

Mr. W. Branson (Market Representative) submitted his report covering the year's operations.

Mr. W. E. Branson, the V.C.C.A. Market Representative, in his report for last season, said that the quality of V.C.C.A. fruit showed an all round improvement and very little waste was observed. Fruit from

some of the younger districts still lacked color and sweetness, but these defects would be cured with age, and also bring about that fineness of skin which characterised fruit from the older groves.

Under the heading of "Incorrect Statements," Mr. Branson dealt with the following:

1. "That our agents were allowed to go to the trucks on arrival and help themselves without the Market Representative having seen the goods."

This is not a fact, as the Market Representative was always on the scene of action when his services were required. Not one complaint was received by any of our agents regarding the allocation, which was not the sweetest job on earth for the Market Representative.

2. "That our trade was being killed by common Oranges being poured in from N.S.W. and being supplied by agents outside the Association in place of Navels."

Heavy consignments of Sydney commons did certainly come to hand, but they only affected our position until those who were being supplied with them discovered the position and made it their business to procure the Navels they required from those who had them to supply. Dealers who refrained from buying during the early period of our marketing were soon compelled to do so to protect their own trade. Any loss that was sustained through the hold off was infinitesimal.

3. "That dealers trading between the Victoria and Western Markets were making a fortune out of our goods."

This is absurd as there are a great number of these individuals and the competition between them to get supplies naturally prevent the huge profits spoken of. In many instances losses were made on their purchases. Further than this a very keen check was kept on the Victoria Market rates, which were always in keeping with those at the Western.

4. "That growers consigning Oranges to agents outside of our Association were receiving two to three shillings a case more for their fruit."

All I have to say is that it is an insult to the buyers' intelligence to infer they would pay more than the fair market price. If they were foolish enough to pay these prices they would not be able to live in the business very long. The writer's experience with buyers in general is that they are too keen to throw their money away in this fashion. Further than this I do not think our agents lost any points in their selling arrangements. Their prices were always that close to the top that there was not sufficient margin for other agents to purchase from them to make a profit of even sixpence a case on the market.

Mr. Branson recommended that all of our crop coming on to the local market be disposed of under the auction system, the selling days being Monday, Wednesday and Friday and that the terms be cash on the fall of the hammer, the lots being put up to suit the purchaser.

After having paid strict attention to every phase of selling, he had come to the conclusion that the means recommended had the biggest possibilities. If the proposal received the whole-hearted support of our growers the movement would be filled with success; the average price right through the season would be greater than that under the private treaty system; the day for fictitious prices would cease; every grower would receive the full market value for his goods and the profits made from the charge of  $7\frac{1}{2}$  per cent. commission would create a fund to develop a trade for selling our large size fruit in the country districts.

Our great trouble during the two seasons operating had been the disposal of our large sized fruit. There was a big demand for this class of fruit through our country districts and he suggested that a campaign be inaugurated by sending salesmen to dispose of this class of stuff. Agents in each town would be employed to receive the orders taken, to receive delivery of the goods and guarantee the cash for same. The initial cost of this business would be fairly great but would almost pay its way and the repeat orders through the agencies when established would more than justify the procedure.

Failing the ability of the Association to see its way clear to engage in this enterprise he would suggest that the next best possible means for the disposal of its crop be through the channel of at least six agents under the same conditions set down last season with an increased staff to deal with the freight and general clerical work required to keep affairs in proper order.

Mr. Brentnall expressed his appreciation of the market representative's report.

Mr. Goodland said his district was undecided whether the auction scheme should be adopted.

Mr. Grant (Tresco) said that the growers were inclined to think that they did not at all times get a fair deal from some of their agents. He was quite sure that no V.C.C.A. agents would be allowed to act in an unfair way.

Mr. Morton (Riverside) said that his district had always advocated the auctioning of fruit as the solution of most of their troubles. He urged the growers to have as their objective the formation of an Australian Citrus Exchange.

Mr. Watmuff favoured the auction scheme provided there was a fixed minimum price.

Mr. Beecher (W.A.) said that in Western Australia all citrus fruit had been sold by auction. One section of the Western Australian growers had now become dissatisfied with the results of the auctioning scheme and had reverted to the private treaty system. He advised caution on the part of the Conference before they changed their method of selling citrus fruits because at certain times they did receive higher prices by private treaty selling than by auction.

Mr. Jacobs (Kyabram) strongly urged that the auction system should be tried. In addition to the auction scheme a private treaty warehouse might be conducted at the same time, and he suggested that one or two private treaty agents be appointed to act simultaneously.

Mr. Mussen confessed that he was afraid of inaugurating the auctioning scheme at present. It called for a capital of at least £10,000. Once they started the scheme they would have to go on with it. If good prices resulted the growers would be glad, but if bad prices were secured the growers would be "down on them" as one man. It might be possible to revolutionise marketing conditions in Australia by an arrangement between the Queensland Committee of Control, the Apple growers of Tasmania and the Coastal Farmers' Society, but he doubted the advisability of the V.C.C.A. tackling the problem alone. Next season was going to be a very difficult one. He did not believe that the growers were going to get the prices of the past. If it was desired by any district Association to increase the number of agents from four he would offer no objection. Some good might result from allowing dissatisfied Associations to appoint additional agents.

Mr. Parkes said that complaints had been made that when some South Australian fruit arrived in Melbourne no body was ready to take charge of it and consequently the agents had been able to take advantage of the position. That caused some dissatisfaction and he was glad to have Mr. Branson's assurance that it was not so. Some South Australian growers were not satisfied with the handling of their fruit, but personally he was convinced that the fruit had been handled as well as it would have been under any other circumstances. He had sufficient confidence in the V.C.C.A. to know that they were doing their best in the interests of every one concerned. Some members of the South Australian Executive favoured the establishment of a South Australian Citrus Exchange, at which the whole of the buyers would come on to the market and buy direct from the growers. He liked the idea, but the question of finance frightened him in just the same way as it had deterred Mr. Mussen in regard to the auction scheme. In his opinion half a dozen accredited agents could

handle the whole of the fruit that the affiliated Associations could send to Melbourne just as efficiently as it could be handled by thirteen agents. He had felt like throwing the trade open to 40 or 50 agents and thus let the growers learn their lesson, because that was the only way in which they would learn. He was not favourably disposed towards the auction scheme.

Major Hallard said that the adoption of the auction system in Sydney at the present time was considered to be impossible. The New South Wales organisation was different from that of the V.C.C.A. and the percentage of fruit controlled by the N.S.W. Citrus Association was smaller in proportion. They could not at present prevent the export of inferior fruit to Victoria. They had considered the advisability of having their own auction floor, but for many reasons, including capital and the probability of tremendously increased competition the proposal was regarded as impossible. They intended to exploit the country trade in New South Wales as heavily as possible in the coming year by the appointment of a skilled staff of agents.

#### Railway Matters.

Mr. M. J. Canny (Outdoor Superintendent, Victorian Railways) stated he had had a great deal to do with the V.C.C.A. and he found it of very great benefit, as an officer of the Railway Department, to have the assistance of such an Association. The Commissioners were thoroughly in favour of co-operative methods in handling citrus fruits. A great many difficulties which had existed in the past had been overcome by reason of the V.C.C.A. taking charge of the business. There was one direction in which the growers could assist the Railway Department, and that was by so arranging their business as to have the number of consignees reduced. If that could be achieved it would be a means of enabling the Railway Commissioners to consider the reduction of freight charges.

Regarding packing sheds, if there was any proposition the V.C.C.A. district Associations desired to put before the Railway Commissioners, they would be very glad to give the matter their most sympathetic consideration. He personally had advocated that the associations themselves should undertake the erection of these sheds, because that would be a more economical course to adopt from the growers' point of view. It might be said, "Why cannot the Railway Department build a shed as cheaply as anybody else?" But it had to be remembered that other people dealt with the shed from a commercial standpoint whereas the Railway Department had to build for the future and to avoid heavy maintenance charges. Should any district desire to build a shed, the Railway Department would provide a site for it. They could rest assured that the Commissioners would continue to give the

fruitgrowers of the State every assistance possible. The Department had assisted the fruitgrowers in another way, namely, by the propaganda in Melbourne. The number of single-case lots of fruit consigned to Melbourne had increased by 33 1-3 per cent. He advocated the distribution of fruit in truckloads. The Railway Department was sending out truckloads throughout the various districts selected after consulting the representatives of the districts concerned.

In order to assist in the distribution of fruit the Railway Department had authorised station masters at various country stations to collect orders for fruit without commission. The service was to be voluntary on the part of the station masters, and he was pleased to say that they were cheerfully performing it in the interests of the State. The Commissioners had reduced the charges for small lots of fruit in case and half case lots. At first the concession was confined to full case lots, but the Department had been disappointed with the result of the shipments to Melbourne, and as a further concession, every suburban station had been made a receiving depot for fruit. He trusted that the fruit-growers would take full advantage of this concession.

The Chairman moved:

"That this Conference of citrus growers desires to convey to the Victorian Railways Commissioners its sincere thanks for their efforts to increase the consumption of fruit, particularly in the shape of the advertising campaign and the reduction of charges and extension to suburban stations of the single case lot delivery system."

The vote of thanks was carried with acclamation, and Mr. Canny suitably responded.

#### Seepage.

Mr. Brentnall (Bamawm) said that the control of seepage was going to become of paramount importance, not only to the Association as an association but to the whole State. The worst feature of the evil was that seepage did not show its worst results until it had been in operation for five or six years. The policy of delay which had been followed by reason of the expense involved had proved disastrous in his district. He moved:

"That a deputation wait on the State Government to point out the serious position which had arisen in Bamawm and in other districts throughout Victoria with regard to seepage and to urge that remedial measures be at once undertaken by the State Rivers and Water Supply Commission to cope with the danger."

Messrs. Fraser Gandie and Morton strongly supported the motion, which was carried unanimously.

#### Wholesale Fruit Merchants'

##### Association.

Representatives of the Wholesale Fruit Merchants' Association attended the Conference at this stage, and

laid their views before delegates. The following gentlemen attended:—Mr. J. Davis (President), Mr. H. M. Wade (ex-president), and Mr. Bert Wilson.

They asked for 10 per cent., selling commission, but this was not acceptable, and the representatives withdrew.

#### Accredited Selling Agents.

The following gentlemen also attended the Conference to represent the accredited selling agents of the V.C.C.A.:—Mr. J. M. Jacobs (Lister & Co.), Mr. Oldham (Coastal Farmers' Society), Mr. Fong (Tim Young & Co.), and Mr. Wing (Louey Pang & Co.).

After an exchange of views and a general discussion, the representatives of the accredited agents announced their willingness to accept re-appointment for the coming season on the same terms as previously. Messrs. Oldham, Fong and Wing then withdrew.

#### Re-appointment of Agents.

Mr. Mussen moved:

"That the Directors be requested to re-appoint the four Melbourne agents who acted for the Association last year, for the coming season on the same terms as in the previous agreement and that arrangements be made whereby each agent would be responsible for the railage on consignments sent to him; and further, that the directors be requested to appoint up to two additional agents at any time during the coming season should they think it necessary in the interests of the growers that those additional agents should be appointed."

Mr. Jacobs seconded the motion, which was carried.

#### Fumigation.

Mr. Brown (Shepparton) moved the following resolutions:

(a) "That the Red Scale pest is the most serious menace the industry has to face, and that, as fumigation is the only satisfactory method of combating it, and the expense of fumigating plants being too great for individual growers, it is desirous that the V.C.C.A. should in conjunction with the Citriculturist and the Department of Agriculture, take steps to overcome the difficulty."

(b) "That in order to be effective, fumigation of all infected orchards and trees in gardens must be compulsory, as any infected orchard not treated will nullify the efforts of neighbouring orchardists to deal with the pest."

(c) "That we suggest that the expense of fumigating should be payable by the orchard fumigated, but that the cost of the outfit and upkeep might reasonably be met by an acreage charge on all citrus, as clean orchards will benefit by the protection given in the cleaning up of infected orchards."

(d) "That as the V.C.C.A. has no powers of compulsion, it is necessary that control should be taken by Department of Agriculture, but that economy in working might be gained by making use of V.C.C.A. organisations to carry out the work."

Mr. Goodland seconded the resolutions.

Mr. S. A. Cock (Government Citriculturist) said the question of Red Scale was of paramount importance to the citrus industry. The districts chiefly affected in Victoria were—Cobram, Shepparton, Kyabram, Echuca, Riverside, Merbein, Mildura, and Irymple, other districts having the disease only in a minor form up to date. It could not be said that any one district in the State was absolutely free.

In order to procure the latest information on fumigation, he had been in correspondence with the Braund Company of California, the Quayle system, Pacific R. & H. Chemical Co. (all of California), and the Horticultural divisions of South Australia, and New South Wales. Necessarily, much controversy had taken place relative to the various methods of fumigation and literature of various descriptions from cyanide manufacturers tended to confuse the issue. They had pot fumigation, the atomised or cold system, and the vaporised or hot system and calcium cyanide, all of which were in use.

Each new publication or product placed on the market, raised the question of new dosage tables and the percentage of "kill." In Victoria they had used nothing but the pot system of fumigation, but it was necessary to try other methods. In order to try out newer methods, experience of the various methods adopted in California was necessary. Professor Quayle went to Leeton, N.S.W., last year, to try out the calcium cyanide system, and arrangements were being made to bring Mr. Russell to Victoria to demonstrate that method.

In the absence of particulars of the cost of the Braund and Hydro Cyanic machines for atomised and liquid gas as used in California, he would give the cost of the pot and the Quayle systems. The cost of the Quayle system would be as follows:—There were four men and two tent pullers, one taper, one man, and an overseer: The cost of such a plant would be £6 in wages. That staff on eight hour shifts, would handle thirty tents to the hour, the equivalent of two hundred and forty trees in a night. The equipment would consist of thirty tents of various sizes. The cost of tents would be 3/- to 3/6 per square yard, 8 to 10 oz. Army duck. Calcium cyanide made by the American Cyanide Company costs in Sydney 1/- per pound, plus landing charges and carriage, etc., 4d. equalling 1/4 per pound. The dosage consisted of 1 oz. to every 100 cubic feet. Worked out at 8 ozs. to the tree, the cost equalled 8d. plus labour 6d. plus in-

terest on capital cost, approximately 1/6 per tree, which was a trifle less than the pot system, which would require an extra man for the same equipment. The cost of cyanide at 1/4<sup>1</sup>/<sub>2</sub> (of guaranteed strength) per pound, and sulphuric acid at 2d. would equal 1/7. The total cost on the same average would equal 1/10 per tree. The cost per tree depended entirely upon the size of the tree to be treated. The following table spoke for itself.

5 at 18 ft. sq., at £4/18/-	£24 10 0
6 at 24 ft. sq., at £8/12/-	51 12 0
12 at 36 ft. sq., at £16/16/-	201 12 0
6 at 48 ft. sq., at £30 ..	180 0 0
4 at 60 ft. sq., at £46/13/-	186 12 0

Total . . . . . £644 6 0

Three equipments would be required—one for Mildura, one for Goulburn Valley, taking in Cobram, and one for Kerang district. The equipment need not be the same, as in some districts the trees were larger, necessitating the use of all large tents, and in other districts the trees might be smaller.

Therefore, there would be an interchange of sizes. He therefore gave the equipment for three districts, at 2½ times £644/10/-, which would equal £1,610. The cost of the machines would have to be included if any other system than the pot system was adopted. For the Quayle system there would be required three Buffalo Blowers for £90, making a grand total of £1,700. Assuming that the whole outfit would have to be replaced once every four years, it would mean a writing off of £425 per annum, plus interest at 6 per cent, £92, making a total of £517, which growers would have to finance every year.

Assuming operations could proceed for three months in every year at an average of twenty days per month, sixty full days at 240 trees per equipment, it would mean that 13,800 trees would be treated by the three equipments, equally a fraction under 3d. per tree for depreciation on equipment and interest.

The finding of the necessary capital was, of course, the most urgent necessity with regard to fumigation. He would suggest that the regulations under the Act be amended by making fumigation for Red Scale compulsory, and by appointing an officer to deal specifically with fumigation and citrus fumigation control, such officer to have all the powers of inspecting and compelling fumigation. After inspection of any grove, the trees to be fumigated to be marked, and the option given to the grower of carrying out the work under the officers' control, using the outfit operating in that district. Failing this, it should be provided that the work shall be carried out at the growers' expense. All fees should be made a charge on the land, and recoverable by law in the same way as municipal, water, or other rates. From such fees, all wages, material, interest and depreciation charges should be met.

Alternatively, there would have to be provided a fund for bad debts, because the experience in South Australia, where a Government outfit had been in operation for many years, showed that the collection of fees was sometimes a hard task. In South Australia, interest was charged after six months' delay.

The finding of money was the most important thing in regard to fumigation.

He would not advise any individual grower to take on the work of fumigation. It would be found that the individual grower could not do it as effectively as it could be done under the scheme outlined in his address. There was the necessity always for a trained gang to carry out fumigation operations.

After Mr. Cock had answered several questions, the resolutions, as moved by Mr. Brown, were carried unanimously.

On the motion of Mr. Mussen, the thanks of the Conference were accorded to Mr. Cock for his interesting address.

It was decided that a deputation should wait on the Minister with a view to ascertaining how far the Government would be prepared to assist the growers in the matter.

#### Immature Fruit.

Mr. Brown asked had anything been done in regard to dry or immature fruit.

Mr. Mussen said that the question had been taken up by the Conference. Since then, a quantity of dry fruit had been seized on the Western Market and destroyed by the Government.

#### Levy.

This was fixed at 2d. per case.

#### Market Representative.

Appointment left in the hands of Executive.

#### Marketing Expenses.

The question of the division of marketing expenses between the States was referred to Federal Council.

#### Cases for Local Market.

Mr. Morton asked if it were possible to make a binding contract with the sawmillers for the supply of suitable cases: Riverside growers did not favor the Simper case, but preferred softwood cases. Referred to Federal Executive.

#### Provincial Markets.

Resolved, on the motion of Messrs. Grant and Brown, "That provincial markets be exploited on the basis of a fixed price for the standard pack."

#### Lemon Crop.

The Secretary placed before Conference the position of the Lemon crop, and suggested that as the marketing of the Lemon crop had become a permanent business, there was no reason why a definite price should not be fixed for the season. In the past, there had been many variations in the prices received by Lemon growers, and the discrepancies that had occurred led to much dissatisfaction.

He would suggest that the delegates might bring the matter before their district association for discussion.

The matter was referred to the Federal Executive.

#### Sale of Case Lots.

The Secretary said the Railway Department had asked was the Association prepared to contribute towards the issue of a pamphlet similar to the one issued last year. The system adopted last year had proved to be very cumbersome and unsatisfactory. If it were possible for districts to say that they were prepared to fix a definite price for case and half-case lots for the season, to be delivered to private consumers, in the suburbs, the names of those districts could be included in the pamphlet. From 70,000 to 100,000 of those pamphlets would be distributed, and the result would be a vast increase in the consumption of fruit by private buyers.

The matter was referred to the Federal Executive.

#### Fruit Bureau.

The Secretary reported that as a result of work done chiefly by the Housewives' Association, a scheme was evolved for the establishment of a Fruit Bureau in Melbourne to facilitate the sale of fruit in case lots to the general public. It was proposed that a price should be fixed for fruit and that orders would be collected and forwarded to growers who registered their names with the Bureau. A registration fee of 10/- per grower was to be charged and sale proceeds were to be forwarded to the growers less 7½ per cent. commission. Before the scheme would be started, not less than 100 growers were required to register.

The latest information available was that only 44 growers had enrolled that it was therefore unlikely that the Bureau would be started this year.

#### Applications by Districts for Shares in V.C.C.A. Pty. Ltd.

Mr. Mussen moved:

"That all districts which had not taken up their quota of shares in the V.C.C.A. Pty. Ltd., be required to do so within one month."

Mr. Quick seconded the motion, which was carried.

#### Proposed Visit by Secretary.

Mr. Mussen announced that the V.C.C.A. Executive had come to the conclusion that it was desirable for the Secretary to visit districts at the conclusion of the Conference. There were a lot of detail matters on which the Secretary required information, such as cases, case-lot prices, and many other things which involved the necessity of voluminous correspondence. He moved that Conference request the Secretary to visit as many districts as possible, before the commencement of next season. (Hear, hear.)—Carried unanimously.

#### Experimental Plots.

The subject of experimental plots was referred to the Federal Executive.

#### Congratulations to V.C.C.A.

Mr. Morton said that he had very much pleasure in moving:

"That the Melbourne Executive and officers of the V.C.C.A. be congratulated on the success of the work carried out during the past season."

Mr. Quick seconded the motion. His members were unanimous in their expressions of appreciations of the work of the Executive and officers of the V.C.C.A.

The motion was carried with acclamation.

#### Withdrawal of Mr. Mussen.

Mr. Mussen (in acknowledging the motion) said that he wished to refer to a personal matter. He had promised that he would devote his services to the V.C.C.A. for a period of two years. That period had elapsed, and he would have to relinquish his association with the V.C.C.A. He would not do so because he wished to do so, but because he had entered into very big commitments which would occupy the whole of his time. He had been inclined to tell the Conference at the opening that he was not available any longer, but he had been since persuaded to allow matters to stand as they were. He would agree so long as it was clear to Conference that during the year he would probably be away a good deal from Melbourne, and could only be reached by letter or telegram. As far as he was able to give advice and help to those carrying on in his absence, he would continue to do so. He would be glad if Conference would realise that probably at the end of the present year, circumstances would compel him to drop the Executive work altogether.

During the past twelve months the business had been largely carried out by Mr. B. S. B. Cook, the Secretary. When the speaker had been absent, Mr. Cook had telegraphed, and they had exchanged views.

He had the satisfaction of being able to say that the V.C.C.A. had established export, that they had built up an organisation and had laid down permanent lines upon which the V.C.C.A. should become of greater benefit to hundreds of growers throughout all the States. (Hear, hear.)

#### Vote of Thanks to the Chairman.

The Secretary moved a vote of thanks to the Chairman for the most effective manner in which he had presided at the Conference. In passing, he remarked that the withdrawal of Mr. Mussen from his activities in connection with the V.C.C.A. was one of the biggest blows it could suffer. It was all very well for Mr. Mussen to say that he (the Secretary) had carried on successfully in his absence, but it would be very difficult without the assistance of Mr. Mussen in the future.

The vote of thanks was carried with acclamation.

The Chairman suitably responded, and the Conference terminated.

#### Some Notes on Fumigation of Citrus Trees.

(By W. J. Allen, N.S.W. Government Fruit Expert.)

OLD CITRUS GROWERS will remember the trouble given by red scale before the introduction of fumigation by the Department of Agriculture over twenty years ago. The first experiments were carried out by the writer in 1899 in the Galston and Kurrajong districts, and at Hawkesbury Agricultural College. Many growers were sceptical of the treatment at first, but owing to the successful results of these and later experiments and demonstrations, fumigation gradually came into fairly general use. With the introduction of miscible oils and the rise in the cost of tents and fumigation material, the method was dropped by many, who, however, found spraying did not give an entirely satisfactory control. It is gratifying to know that since the cost of outfits and material has dropped fumigation is again being gradually adopted (writes Mr. W. J. Allen in the "Agricultural Gazette of N.S.W.").

Liquid hydrocyanic acid cannot be transported by either rail or water, and two years ago the Department made inquiries as to the possibility of it being manufactured locally, and found no encouragement. Seemingly, therefore, there is very little hope for its use for fumigating fruit trees in New South Wales at present.

Professor H. J. Quayle has been investigating fumigation with calcium cyanide, the first work with which was carried out in California last year with very promising results. Tests were conducted on the Murrumbidgee Irrigation Areas, beginning on the night of 27th March last, and were continued for three weeks, 200 trees being treated in six different orchards. Professor Quayle has now submitted his report to the Water Conservation and Irrigation Commission, and from it the following is extracted:—

"Calcium cyanide in the form of a very fine powder was used by simply being blown under the tent by a special dust-blowing machine. The results on all these test blocks were entirely satisfactory. There was a complete kill of the scale with full dosage, and no injury was done to the trees."

"The advantages of this new system involving the use of powdered calcium cyanide are its simplicity, its much less cost, and the fact that there is no acid to burn the tents, and consequently shorten the life of the most expensive part of the fumigation equipment."

"The comparative cost of the old and new systems may be shown for an average sized tree in this area requiring about 6 oz. cyanide, the same amounts of calcium and potassium

cyanide being required for a particular tree.

#### Old System.

Potassium cyanide at 1/7 per lb	
—6 oz. . . . .	7d.
Sulphuric acid at 7/6 per gall.	
—6 fl. oz. . . . .	3d.
Total . . . . .	10d.

#### New System.

Calcium cyanide, at 8d. per lb.	
—6 oz. . . . .	3d.
Total . . . . .	3d.

"Therefore the cost of materials under the old system is three times that under the new."

"The new system is more restricted to proper weather conditions than the old and the limiting factor is moisture. However, during the most suitable months for fumigation in Australia, i.e., January, February, March, the weather conditions should be satisfactory in this area" (Murrumbidgee Irrigation Areas).

The results of the first tests were so encouraging that further tests were carried out till 7th May, when work was stopped owing to rain, which continued intermittently till middle of June. The Lemon trees treated just before the rain were more or less injured, while some of the Orange trees only suffered a slight leaf-drop.

Professor Quayle concludes his report with the opinion that "the only treatment that is at all satisfactory for red scale on citrus trees from my experience is fumigation with hydrocyanic acid gas, regardless of the particular source from which that gas comes."

It may be mentioned that the tents used for ordinary fumigation were used for the calcium cyanide tests, but the flap was not banked down with soil as in the old system. The ground about the trees should be clear of weeds, so that the flap can lie close on the ground. The blower is provided with a hopper into which the measured dose of calcium cyanide is placed and then blown under the tent. The work is carried on at night, as in the old system of fumigation, and the tent is left over the tree for the same period. If the trees get wet before the foliage is clear of the calcium cyanide more or less defoliation is likely to occur. If this injury is likely to be severe there is an element of risk even in inland districts with normally dry summers, as thunderstorms are likely to occur without warning. In the coastal areas not only are dry spells less certain, but there would also be night dews to be contended with.

The Department is arranging for tests with calcium cyanide to be carried out in the coastal districts, in order to ascertain whether it can be used there as well as in inland parts. Calcium cyanide is quoted on the local market at £6/10/- per 100-lb. keg, f.o.b., Sydney, and at £1/15/- per 25-lb. keg.

Whether it will be injurious to the canvas of the tent cannot be definitely stated until it has been used for some time.

## The Art of Packing Oranges.

### The Use of "Dump" Cases for Local and Interstate Markets.

(By Basil Krone, Orchard Supervisor, Victorian Dept. of Agriculture.)

**T**HE FOLLOWING TABLE of packs is arranged in the form of a ready reckoner, which will make the packing easier for the beginner to learn.

In some circumstances any of the following packs may be brought into use, but in order that the chart may not be misleading to the packer, I have marked certain packs with an asterisk to indicate the packs and size fruit most commonly used in a packing shed (writes Mr. Basil Krone, of the Victorian Department of Agriculture).

To anyone accustomed to packing hard fruits, such as Apples, these packs appear to be quite out of proportion. This is on account of the

greater amount of elasticity in citrus fruits.

The essential of a good pack is good grading, both for color and size, and as Oranges are probably the easiest of all fruits to pack, no difficulty should be found in packing all sizes to the correct height in the case if the Ready Reckoner or Chart below is referred to occasionally.

Fruit of a slightly larger diameter than those mentioned on the Chart may be necessary if the fruit has been much sweated.

### Packing Lemons.

### Diagonal System in Dump Bushel Case, 18 x 8 2-3 x 14 $\frac{1}{4}$ .

**O**N account of the peculiarity of sizes in Lemons, I have found it more suitable for our "flat" bushel case, 26 x 6 x 14 $\frac{1}{4}$  and "dump" case not to have the Chart or Ready Reckoner with the fruits measured in eighths. The reason for this is that two Lemons may measure 2 $\frac{1}{4}$  inches in diameter, but one may be  $\frac{1}{4}$  of inch longer than the other.

### Standardised Packs for Oranges in Dump Bushel Case, 18 x 8 2-3 x 14 $\frac{1}{4}$ (inside measurement).

#### Diagonal System.

Size.	Style	Pack.	Descrip- tion of Layer.	No. of Layers		No. of Oranges
				in Layer.	in case.	
2 $\frac{1}{2}$ in.	3-2	3-2	6 x 5	7	193	*2 $\frac{1}{2}$ inch.
	3-2	3-2	5 x 5	7	175	For reference to this pack see below
	3-2	3-2	5 x 4	7	158	*2 $\frac{1}{2}$ inch.
	†2-2	†2-2	6 x 5	7	154	*2 $\frac{1}{2}$ inch.
2 $\frac{3}{4}$ in.	3-2	3-2	4 x 4	7	140	*2 $\frac{3}{4}$ inch.
	or	or				*2 $\frac{3}{4}$ inch.
3 in.	2-2	2-2	5 x 5	7	140	*3 inch.
	2-2	2-2	5 x 4	7	126	*
	2-2	2-2	4 x 4	7	112	Seldom, if ever, used.
	2-2	2-2	5 x 4	6	108	*3 $\frac{1}{4}$ inch.
3 $\frac{1}{4}$ in.	2-2	2-2	4 x 4	6	96	
	2-2	2-2	4 x 3	6	84	
	2-1	2-1	6 x 5	5	83	
	2-1	2-1	5 x 5	5	75	*
3 $\frac{1}{2}$ in.	2-1	2-1	5 x 4	5	68	*3 $\frac{1}{2}$ inch.
	2-1	2-1	4 x 4	5	60	*3 $\frac{3}{4}$ inch.
3 $\frac{3}{4}$ in.	2-1	2-1	4 x 3	5	53	*
	2-1	2-1	3 x 3	5	45	*4 inch.
4 in.						

+Occasionally mistakes are made with the 158 and 154 packs or counts, viz.:—A packer may use the 154 pack and the case appear to be apparently full and well packed, but the difference between this and the four extra Oranges in the 158 pack often decide between a good and a slack pack after the fruit has arrived at its destination.

The reverse of this must also be noted, as the packing of the correct number may define between an "over-pressed" pack and one of just that right degree of "snugness" in which the fruit should fit in the case; this the packer must be able to determine for himself.

The same thing is likely to occur with the 96 and 112 counts.

If the packer packs the larger of the 2 $\frac{1}{2}$  inch grade into one box, and the smaller of the 2 $\frac{3}{4}$  inch grade into another box, he will be grading his fruit unconsciously into eighths. The same can be done with the 2 $\frac{1}{2}$ , 3, 3 $\frac{1}{4}$  and 3 $\frac{3}{4}$  inch grades. This, in my opinion, is the easiest way to learn to pack in grades of an eighth, particularly where mechanical fruit grading machines have not been installed.

The asterisks indicate sizes that would be most profitable on the market.

When commencing to pack, no matter what style of case, the button or stalk should always be placed against the end of the case, and the last fruits in each layer should also be turned so that the buttons will press against the wood of the case instead of the nipple at the other end, which is delicate and easily damaged.

#### Lemons in Dump Cases.

##### Diagonal System.

Size.	Pack.	Layer.	Layers.	Total.	No. of
2 in.	3-2	6 x 5	9	248	
2½ in.	3-2	4 x 4	8	*160	
2½ in.	2-2	5 x 5	7	*140	
2½ in.	2-2	4 x 4	7	122	
3 in.	2-2	3 x 3	7	84	

The asterisks indicate sizes that would be most profitable on the market.

#### Lemons in "Flat" Bushel, 26 x 6 x 14½.

##### Diagonal System.

Size.	Pack.	Layer.	Layers.	Total.	No. of
2 in.	2-1	4 x 4	8	192	
2½ in.	2-1	4 x 3	8	168	
2½ in.	2-1	3 x 3	8	144	
2½ in.	2-1	3 x 2	7	106	
3 in.	2-1	2 x 2	6	72	

#### Packing Oranges for Export.

Standardised Orange Packing for Export in the one and a third bushel case, 11½ x 11½ x 24 inches inside measurement clear of the division. The following packs are suitable for Navel Oranges for export, and were introduced by the Victorian Central Citrus Association. With all these counts, there is not the least trouble in bringing the fruit to the correct height.

The Chart is as follows:—

#### Oranges in Citrus Export Case, 11½ x 11½ x 24 (clear of the division).

Size.	Style of Pack.	Description of Layer.	Number of Layers in case.	Number of Oranges in case.
2½ in.	4-4	3 x 3	6	288
2½ in.	4-3	3 x 3	6	252
2½ in.	3-3	3 x 3	6	216
2½ in.	4-4	3 x 2	5	200*
2½ in.	4-3	3 x 2	5	176*
3 in.	3-3	3 x 2	5	150*
3½ in.	3-2	3 x 2	5	126*
3½ in.	4-3	2 x 2	4	112
3½ in.	3-3	2 x 2	4	96
3½ in.	3-2	2 x 2	4	80
3½ in.	3-3	2 x 1	4	72

The large-sized fruits in these packs should not on any account be packed for export. These large fruits should be packed in dumps for local trade. The asterisks indicate the best selling sizes to pack for export.

#### CITRUS CROP PROSPECTS.

##### "Generally Light."

Up till quite recently it was anticipated that there would be a bumper crop of citrus fruits in Australia.

According to present indications, however, it is evident that these earlier anticipations will not be fulfilled.

The latest reports are as follows:—

##### South Australian Crop Light.

Mr. Geo. Quinn, South Australian Government Horticultural Instructor, writes under date, February 18th:—Owing to the excessively wet season experienced in 1923 extending well into the spring and summer months,

the setting of Oranges—which promised so well—has fallen away very considerably, and the shedding of the young fruits has been so prevalent that it is not anticipated that the Orange crop in this State will reach a fair average yield.

The Lemons are at present promising for a good winter crop.

#### RIVER MURRAY DISTRICTS.

##### Medium Crops Expected—Better than Last Season.

The Orange crop on the whole has not set as well as flowering indicated (writes Mr. C. G. Savage, Deputy Horticultural Instructor, Berri, South Australia on 20/2/24). This was due to the cold S.W. winds experienced at, and just after, the flowering period. The trees on the south and west sides are carrying little fruit, practically the whole of the crop being on the eastern side of the trees.

The trees in the protected positions are carrying heavy crops, those which have been well fertilised with nitrogenous manures are also carrying fair

No reliable data is yet available to enable the production in our districts to be determined, but approximate estimates indicate a short crop. Last season our output was only about half the 1922 year, and it is safe to assume that the ensuing season will show a crop quite as small as 1923. Short crops for two successive seasons is quite unprecedented in these districts.

The approximate area under cultivation is 1,360 acres. Apart from Washington Navel, Late Valencias, and Mandarins, very few varieties have been planted.

Through seasonal or other causes the trees throughout the River districts, in the main, presented a very sickly appearance towards the end of 1923, but a wonderful recovery has been made, and in most instances where the decadence was evident, the trees have quite recovered, and present a healthy appearance.

#### Torrens Valley and Salisbury.

Mr. H. Wicks, Riverside-Payneham, S.A., reports under date 22/2/24:—

Citrus in these districts—Torrens Valley and Salisbury—as follows—Navel, light to medium; ordinary Sweet Oranges, light.

Compared with last year, the Navel are carrying about the same quantity, but common Oranges much lighter.

The varieties in the old Orangeries are principally composed of such sorts as St. Michael, Sabina, Silletta, Paramatta, etc., but in the younger plantations a large proportion are Navels, and the balance made up with Valencias, Joppa, Compuda, Ruby Blood, Lemons, and Mandarins.

In this district the citrus planted are mostly for State and interstate requirements, and not for European markets; during the last two seasons there has been a very limited quantity planted, but owing to the severe floods of last winter, a large number of trees have died, consequently I should say there is no increase, but rather a decrease.

#### Medium Crops on Adelaide Plains.

Mr. J. Donaldson, of Paradise, near Adelaide, reports under date February 18th:—

The crop of citrus in and around Adelaide Plains will only be medium this year, and the trees as a whole are still suffering from the record wet winter we have passed through.

The crop does not compare with last year, I should say by one-half, in the ordinary common Oranges, but will have a better average in Navel.

I cannot report any development in planting, as I consider the loss of trees dying out will only fill up the space of those planted.

As to the future prospects of the industry, much depends on the life of the trees planted on the River Murray. Personally, I do not think that the trees will stand to any great age, on account of the brackish water being used when the river is low.

The Murray Citrus Growers' Co-operative Association (Aust.) Ltd. (J. A. Parkes, Secretary) report, under date February 21st, regarding the 1924 citrus crop:—

## NEW SOUTH WALES.

## Good Crops Anticipated.

The Under-Secretary and Director of Agriculture, Mr. Geo. Valder, writes under date February 19th:—“The recent rains in the citrus districts of New South Wales have improved the prospects of the citrus crops. Though some districts report light crops. Taken as a whole, a good crop can reasonably be expected.”

**Kurrajong** (23/2/24). Mr. W. Arnold reports:—

**Citrus Crop Prospects.**—Owing to an extremely dry season, the citrus crop in the Kurrajong district will be very light “particularly Emperor Mandarins and Navels.”

As a result of recent rains, the trees are showing an intermediate bloom. All crops in the Hawkesbury district, as a result of the dry season, will be extremely light. The citrus fruit crop will be lighter than last season. The main varieties planted here are Late Valencia, Emperor Mandarins, Washington Navels and Joppa.

Area under citrus fruit—Kurrajong District, 1922—3,646 acres bearing, 1,189 acres non-bearing.

The recent rains are timely for vegetable growing on the Kurrajong. Peas are now being sown in quantity.

The district is developing steadily. The railway extension from Richmond to Kurrajong, now in course of construction, will do doubt give an impetus to development.

**Griffith.**—The General Manager of the Griffith Producers' Co-operative Co. Ltd. (Mr. H. G. Such) reports on 16/2/24, regarding the crops at Griffith, N.S.W.

The crop this season is medium, probably 20,000 bushels Navels, 20,000 bushels Late Valentias, and 5,000 bushels Commons.

Mandarins and Grape fruit are light. It is rather early in the year to give any figures, but these may be taken as an approximation of the position.

**Leeton.**—Messrs. Ross Reid Bros. write under date, February 18th:—

Navels will be light: probably the total will be less than last year, in spite of the young trees coming into bearing.

Late Valentias, a fair crop.

## WESTERN AUSTRALIA.

It is estimated by Mr. Geo. W. Wickens, Officer-in-Charge Fruit Industry, Western Australia, that the 1924 Orange crop will be medium, i.e., 35 to 40 per cent. under last year's crop; Mandarins, very light; Lemons, good.

The official figures for last season's crop were—Oranges, 187,491 bushels; Mandarins, 14,318 bushels; Lemons, 45,713 bushels.

## QUEENSLAND.

## Montville.

Mr. W. H. Harvey, Montville, reports crops anticipations (19/2/24) as follows:—

**Citrus**—Washington Navels, very light; Mandarins, medium to good; Oranges, all varieties, medium. In some instances slight damage was caused by hail.

The crop should be about the same as 1923.

We have had good rains regularly since beginning of November, and this country is a picture.

**F.W. MOORE & CO**  
LIMITED  
Clarence House  
Arthur Street, London Bridge  
**LONDON E.C., 4, Eng.**

We are the largest receivers of Green Fruit from Australia, our consignments having steadily increased annually since our business was established in London in 1902. Our Managing Director has had the handling of consignments to the markets of Great Britain and Europe since 1900, and personally supervises the sale of all fruit consigned to the Company. Fruit is placed for sale in whatever markets or way (auction or private) appear most suitable, thus getting it before all classes of buyers; our increasing consignments demonstrate the success of this practice.

**F. W. J. MOORE,**  
Managing Director.

Telegrams: Tirralirra London

Bankers: Bank of New South Wales.

Pineapples are in full swing just now, and factories are getting large supplies.

## Redland Bay.

Mr. Jas. Collins, Redland Bay (Q.), reports under date, February 18th: Citrus crops generally are on the light side in this district, especially Oranges and Mandarins, but the Lemon crop will be heavy, and promises to be better than usual. On a few orchards where trees are young (from 6 to 10 years) there are heavy crops of Naval Oranges and Mandarins showing, but it is not expected that the total crop will be as heavy as last season.

The area under citrus is not as large as it was some years ago, the fighting of insect pests has caused several growers to root out Oranges and Mandarins, and plant other varieties of fruit that require less fighting for.

## VICTORIA.

**Kyabram** (20/2/24), Mr. C. Roper reports that the citrus crop which was very light was further thinned by a violent storm some weeks ago, and that now the trees are almost free of fruit.

The hailstorm on 19th February did further harm to citrus and canning crops.

## Shepparton.

**Citrus Prospects.**—W. Navels and Late Valentias mainly grown here. Crop made a big show in blossom, but we only expect about 20 per cent. increase on last year, which was rather poor in quantity. Lemon crop is not heavy: difficult to estimate. Some growers report almost total failure, others a fair crop only.

## VICTORIAN CITRUS INDUSTRY.

## Deputation to Minister.

In response to a deputation from the recent Citrus Growers' Conference, the Assistant Minister of Agriculture, Hon. M. E. Wettenhall, stated he would favourably consider the request that Lemons grown in the Mildura district, and affected with Red Scale, be allowed to be sold to the local factory, provided the bags were burnt.

**Seepage.**—The Government viewed this matter seriously, and he would strongly advocate that the Water Commission be provided with extra funds to alleviate the position.

**Experimental Plots.**—He was in favor of establishing experimental plots for carrying out continuous tests respecting cultivation, manuring, pruning and propagation of citrus trees.

**Fumigation.**—He would do his best to get the Government to provide the funds for running a fumigation plant. The money might be paid off by a charge per tree fumigated, sufficient to pay interest, sinking fund and working costs.

**Registration Fee.**—He favored a compulsory fee of 1/- per acre.

The Minister congratulated the V.C.C.A. on its achievements.

## TASMANIA.

A reader at Scottsdale states that though his orchard was showing badly with Black Spot, he sprayed with Burgundy Mixture, and practically eradicated it, and has not more than four or five cases of spotted Apples in an estimated crop of 2,500 bushels.

## News in Brief.

Legislation is proposed to be introduced in Victoria to provide for (1) a registration fee of 1/- per acre for organising purposes, (2) the selling of certain fruits by number instead of by weight, (3) the number of fruits contained in each case to be marked thereon, (4) the adoption of the Commonwealth standards for local and interstate trade.

Growers of canning fruits are requesting an increase in the price of fruit (under the Bounty scheme) in proportion to the increased prices being charged by the canneries for the finished product.

The damage done by the Rutherford Fly in the Goulburn Valley is estimated by growers at over £30,000.

On outbreak of Fruit Fly has occurred at Mildura, Vic. Owing to strenuous efforts being made, it is anticipated the pest will be entirely eradicated from the State.

Tasmania has adopted the Commonwealth Apple and Pear grading regulations for use in Interstate Trade.

A Ministerial statement in Victoria is to the effect that similar action will be taken in that State.

It was stated at the recent Australian Citrus Conference that the Victorian Government had seized and destroyed consignments of immature and dry Oranges.

The citrus crop, on the whole, is much lighter than was previously estimated.

Fruit retailers in Melbourne have protested to the Minister of Agriculture against the poor quality of Queensland Bananas being received, and also short weight of Tasmanian berry fruits.

Fruitgrowers in Victoria and Murray districts of South Australia are protesting against alarmist views and panic legislation because of the temporary presence of the Fruit Fly at Mildura.

A device has been patented by Mr. Kendall, chief engineer of the s.s. "Baradine," for inserting between cases of fruit in the holds of steamers. The idea is to do away with the present stout laths which are used as Dunnage. The patent method is to insert between each case a metal guard, which saves space and allows for complete air circulation.

A country promotion week is to be held in Melbourne from March 6th to 12th.

Heavy crops of Grapes are being gathered this season at Berri, River Murray, South Australia.

Government Inspectors state that the quality of the fruit now being exported from Victoria, South Australia and Western Australia is of high quality. In Victoria the bulk of the consignments are being marked "standard," comparatively few growers taking the risk of marking the cases "special."

Interesting and valuable notes on the drying of Sultanas are given by our Special Correspondent in the Murray Valley.

Comments on the new Queensland marketing scheme were made at the recent Australian Citrus Growers' Conference.

The Australian Conference of Fruitgrowers will be held at Hobart, commencing on April 28th. The Pomological Committee will meet at Hobart the same week.

The system of selling fruit from trucks in special "fruit trains" is being extended. A warning is sounded in N.S.W. urging growers to pack "quality" fruit only, as instances of dishonest packing have occurred.

The starling curse is still prevalent in orchard districts throughout Australia. As with other pests concerted and determined action is necessary to eradicate or minimise the evil.

The need for research into methods of controlling orchard pests has been emphasised by meetings of fruitgrowers in Victoria. In particular the Rutherford Bug calls for special attention.

### PERSONAL.

Mr. Farrell, one of the Orchard Inspectors of the Victorian Department of Agriculture, whilst on duty at Mildura, became infected with anthrax, and became seriously ill. It is supposed the cause was a shaving brush. Mr. Farrell is now improving.

Mr. Fred. W. Vear, of Burwood, and 49 King-street, Melbourne, has been nominated for the Victorian State Advisory Fruit Board by the Exporters' Handling Committee and the Chamber of Commerce.

Mr. J. W. Aspinall has been elected to the same Board by the Victorian Fruitgrowers' Central Association in place of Mr. J. Oldham, who resigned.

The appointment of the Government Biologist, Mr. W. Laidlaw, to the position of Curator of the Melbourne Botanic Gardens, has rendered vacant the position of Biologist.

It is hoped that this important position will be speedily filled, and that the qualifications of that talented and

earnest scientist, Mr. C. C. Brittlebank, will not be overlooked.

Mr. C. C. Farran has been appointed London Representative of the Mildura Co-operative Fruit Co. Ltd. The address of their London Office is 59 Eastcheap.

### THE RUTHERGLEN BUG.

Serious Damage in the Goulburn Valley.

**Growers Urge Greater Research: and Support an Orchard Registration Fee.**

The serious losses sustained by fruitgrowers in the Goulburn Valley (Vic.) through the ravages of the Rutherford Bug have moved growers to definite action.

Mr. S. A. Cock, Government Citriculturist, was deputed to make a personal investigation, which he did, and in the course of his report, he stated 900 acres in Shepparton and Ardmona: attacks were in "patches," the principal fruits attacked being Pullar's Cling and Elberta Peaches. Tuscans were only slightly attacked: Nichols, Levis, Sims, and Goodman's were practically free: damage to the extent of £15,000 had been caused.

Smoking was only partially successful, and tended to drive the pest from infested orchards to clean ones. Spraying with Benzole Emulsion was 90 per cent. effective: the cost was 14/- to the 80 gallon vat, or 3d. per bearing tree plus 1d. per tree for labor.

\* \* \* \*

At a largely attended meeting of the Shepparton Irrigators' Association during February, the seriousness of the Rutherford Bug infestation was emphasised.

Resolutions were adopted—(1) Urging the Government to establish a Research Department without delay; (2) urging the Government to introduce legislation providing for an Orchard Registration fee.

It was considered that the funds raised by means of an orchard registration fee would enable the growers to be much better organised than they are at present.

The damage done by the Rutherford Bug is set down at between £30,000 and £40,000—over twice the amount estimated by the Citriculturist.

### AUSTRALIAN CONFERENCE OF FRUITGROWERS.

The Annual Australian Conference of Fruitgrowers will be held at Hobart during the week commencing Monday, 28th April. The Hon. L. M. Shoobridge, M.L.C., will preside. Subjects of vital importance have been set down for discussion. The Australian Pomological Committee will hold its annual Conference at the same time. An interesting social programme has been drawn up by the Tasmanian executive. The Honorary Secretary, is Mr. R. E. Boardman, 9 Queen-street, Melbourne, Victoria.

# Fruitgrowing Under Irrigation

CURRENTS : DORADILLOS : SULTANAS  
VALUABLE HINTS ON DRYING VINE FRUITS.

(By Our Special Correspondent.)

THE CHIEF TOPIC under consideration during the early part of February in the Irrigation areas is, "When to pick Currants."

Several growers had commenced gathering Currants, but found it necessary to stop operations, not so much on account of the low sugar content, but on account of the uneven color of the fruit. Repeatedly growers have found their fruit showing 14 to 15 degrees Baume, but still many of the berries on the bunches being red and even green in color.

The comparatively cool summer, with its many variations in temperature, has not been conducive to an even ripening up of the berries.

Each season as the Doradillo Grapes commence to develop their sugar, many of the vines scorch; the fruit shrivels, and in some instances the vine dies back.

Close examination reveals, in some instances, a lack of proper cultivation, or imperfect irrigation practices. At this period, i.e., when the

sugar is developing in the fruit, the strain upon

the vitality of the vine is very great. Should a heat wave be experienced just then, the increased transpiration of moisture from the fruit and leaves, will result in the vine suffering more or less according to its vitality, and the moisture available in the soil.

Sometimes whole plantations of Doradillo vines burn off, or it may be odd vines that suffer. In the latter case, one is apt to think it is due to some weakness in the particular vines.

The Doradillo, like most other vines, are propagated from cuttings that are obtained promiscuously from wood cut from vines during the pruning operations.

Cuttings from strong, healthy, heavy bearing vines are thrown together with those from the weak and more or less unhealthy plants.

From these the vines are raised planted out, and produce plants, some of fine healthy constitution, while

others are always more or less weak. . . The need of selection is just as apparent in the propagation of vines as in the raising of any other nursery stock.

Growers of Doradillos are advised to plough their vineyards deeply, cultivate deeply, manure well, especially with green manure; irrigate thoroughly, just prior to the time the sugar commences to rise in the fruit, say, in late January or early February.

These irrigations will, of course, be governed by the time fixed by the board controlling the water supplies.

## Harvesting of Sultanas.

When these notes appear in print, in all probability, the harvesting of the Sultana crop will be well in hand.

*Continued on next page.*

## Cooksley & Co.

(W. P. COOKSLEY)

Reliable Fruit Agents  
22 Years' Experience

TRY THEM!

## Fruit Exchange, Brisbane

QUEENSLAND.

Shipping No. 29

Reference: Commercial Banking  
Co. of Sydney Ltd.

## APPLE AND PEAR GRADE STANDARDS.

Tasmania Adopts the Commonwealth Regulations for Local and Interstate Trade.

REGULATIONS have been gazetted in Tasmania for the grading of Apples and Pears for local and interstate trade, under the Apples and Pears Act of 1918.

The regulations are the same as those accepted by the Commonwealth authorities for the export trade, viz., (1) Special, (2) Standard, and (3) Plain, with two additional grades added, viz., (4) C. Grade, and (5) Factory use.

Particulars of the three first-named grades have already been published: the others are:—

"C Grade," Apples and Pears of one variety of one size free from broken skins and not badly misshapen.

"Factory Apples": Apples or Pears not eligible to be shipped in the grades specified may be shipped in bags or boxes, provided they are consigned to a factory and marked "For factory use only."

## FRUIT FOR THE FLEET.

The visiting section of the British fleet has arrived at Australia: the squadron will be at Melbourne on March 17. Victorian fruitgrowers are offered, through the organisation of the Y.M.C.A., an opportunity to send some fruit to the sailors.

Fruit addressed to Mr. S. Maclaren, Y.M.C.A. Fleet Secretary, 130 Flinders-street, Melbourne, will be promptly delivered to the men.



## A RELIABLE SPRAYER

Here is a Plant that Practical Orchardists Value:

**PUMP**—Double-Acting, High Pressure, Single or Duplex as required, working up to 300 lbs. per sq. inch.  
**ENGINE**—1½ H.P. Fairbanks-Morse, type "Z," operating on kerosene.

**VAT**—Approximately 80-gall. capacity; strongly made, easily cleaned.

**HOSE**—Two 30-ft. lengths 6-ply H.P. hose fitted with "Edgell" patent cut-off and Bordeaux nozzles.

**TRANSPORT**—Low-set, well-balanced and firmly put together.

Let us quote you for prompt delivery.

**Dangar, Gedye & Co. Ltd.,** Young St.,  
**SYDNEY**

Growers should do their utmost to place the best possible sample

upon the market. We have to depend, to a very great extent, upon our export markets, as the Australian consumption of our dried Grape fruits has been long passed by the quantity of dried fruit now produced.

We must not be content to place an article that is equal to our competitors, upon the overseas markets, but we must place one there that is better, and pack it in an attractive manner.

The Sultana should not be picked before it has developed its maximum of sugar. The grower not only loses weight in drying when an immature fruit is dried, but a poor flavoured, often more or less sour Raisin is produced.

The fixing of a

#### definite Baume reading

for the picking of any particular fruit, is at times a faulty method of gauging maturity of that fruit. The Baume Hydrometer needs to be handled with care, and the readings taken very carefully otherwise the records will be of little value.

The fruit should be tested every few days, and the results recorded, and when the fruit has reached a point where little variation is shown in the readings, the fruit may be considered to have reached maturity.

The Baume readings from mature fruit of the Sultana will in most cases be above 14 degrees.

The question of the strength of dip required depends upon the condition of the fruit.

Should the berries be mainly of a deep amber color, the lye will need to be stronger than where the fruit is more or less green in color.

The amber colored fruit will be found on vines with scanty growth, and where the bunches have been more or less exposed to the sun.

The green bunches are picked from dense foliated plants, where the fruit is well shaded.

Though the "rule of thumb" method of testing the lye has been given in these pages before, a repetition may not be out of place, as many new growers will be drying the Sultana for the first time this season.

The question of temperature, at which the lye is to be kept during the dipping operations, should be decided.

Most growers prefer a boiling dip, while some kept the lye at about 198 degrees Fahr. The boiling dip is perhaps the most easily controlled, and gives good results.

The lye is made up to a certain strength, say, 1lb. caustic soda to 30 gallons of water, when at boiling point a bunch of Grapes is immersed in it for a couple of seconds. The fruit is then exposed to the air for a

minute or so, and then closely examined to ascertain if the skin has been slightly cracked.

If minute cracks are noticed around the stem end of the berries, the lye can be considered to be the correct strength, and dipping operations may proceed. Should the fruit over crack the lye must be diluted down, or should no cracks appear, more caustic soda must be added until the desired cracking results.

After dipping, the fruit should be well drained, it is sometimes then passed through a water bath, usually the fruit is not washed before being spread on the racks.

As soon as the fruit has drained, it should be placed on the drying racks or trays, for if left long in the buckets the fruit is apt to darken in color, and spoil the look of the finished article. The trays should be spread out to the sun, and the racks should be left uncovered, in the event of rain the trays must be stacked, and the racks sheeted up.

'Phone Central 8479

## F. W. Vear

*Fruit Importer  
and Exporter*  
COMMISSION AGENT

### 49 WILLIAM ST., MELBOURNE, VIC.

Solicits consignments of APPLES,  
ORANGES, BANANAS, PINES and  
all other fruits.

Account sales with cheque daily.

Do not remove the fruit from the racks until it is thoroughly dry, otherwise many berries are cracked, and the juice escapes.

The sugar makes the fruit more or less sticky, causing much difficulty in stemming and grading it. The sugar tends to give the fruit a more or less whitish appearance after it has been kept some little time, thus detracting from its appearance.

Dry the fruit well, and sweat it thoroughly, so that good even samples of properly cured Sultanas will be placed on the markets.

**F**RUIT for THE BRITISH FIRE EXHIBITION is to be sent in The Patent Climax Cases.

Why not send yours to market in these cases? THE OVERSEAS SHIPPING COMPANIES strongly recommend you to do so.

See Advt. in "Fruit World" for January, 1924, page 55.

W. M. Green, Baxter, Vic.

—(Advt.)

## Orchard Pest Control.

Latest Methods and Remedies.

**Fruit Tree Washes. Nicotine Sprays.**

**I**N the war against insect pests and fungus diseases, there is no armistice, and no cessation of hostilities. Fruitgrowers know this; it is a part of their set programme. The question which exercises their minds, however, is this. What is the best remedy for this or that orchard pest? And having gone that far and settled in a general way, for example, that Arsenate of Lead is necessary for spraying to combat the Codlin Moth, another question arises, "What brand of lead is the best for my purpose?"

This is where the scientist enters. The battle against insect and fungus foes is fought out in the laboratory, the correct proportion of the essential ingredients are decided on scientific and practical knowledge. All that remains to do is for the grower to use reasonable skill and thoroughness in applying the spray mixtures.

In order to supply certain tested spraying compounds which have won the keen approval of growers, Australian firms, favorably known to orchardists, are placing insecticides and fungicides on the market.

In Victoria, the business is being handled by Messrs. Newell and Co. of 189 King-street, Melbourne, this firm being also the suppliers of Nunan's Patent spray irrigation system, in which capacity, they have won the confidence of orchardists.

The spraying compounds which are being offered by Messrs. Newell and Co. are the well-known productions of Messrs. McDougall and Robertson Ltd., of Manchester, England, and include the following:

McDougall's No. 2 Fruit Tree Wash—a combined insecticide and fungicide, for destroying scales, aphides, plant bugs and red spider, also Black Spot, Mildew, and many other fungus diseases.

Katakilla.—A powder insecticide wash, destroys caterpillars, aphides, mealy bug, etc.

Derrisene.—A powerful liquid insecticide, having all the killing power of nicotine. (It is equal in strength to pure nicotine.) Invaluable for destroying biting and sucking insects.

Messrs. Newell and Co. will be glad to supply growers with added details, and will gladly post an illustrated booklet entitled, "A Guide to Spraying," on request.

Messrs. Newell and Co. have also been appointed agents for the well-known hand spraying appliances manufactured by Messrs. W. T. French and Co., of London, Eng., which include knapsack sprayers, atomisers, etc. Full particulars are obtainable on application to 189 King-street, Melbourne, Vic.—(Advt.)

## FRESH GRAPES FOR EXPORT.

Plantings of Ohanez Grapes have Steadily Increased, and a Satisfactory Export Trade is Being Built Up.

Interesting Comparisons between Spanish and Australian Conditions.

**T**HE STEADY DEVELOPMENT of the export Grape industry in Australia warrants special mention at this time.

The Ohanez Grape was probably the first introduced into Australia by Mr. Hardy, a noted South Australian wine producer. It was then called Daira (pronounced Da-eera)—after a small town in Spain, where this variety was then growing.

Cuttings were subsequently distributed, but by the transposition of the letters, it began to be called "Daria," by which erroneous appellation it is known on the Murrumbidgee Irrigation Areas to-day.

But the variety remained practically unknown until the visit of the Victorian Government Viticulturist, Mr. F. de Castella, to Spain, in 1907. Attracted by the vigorous growth and bearing qualities of the Ohanez variety—for that is its correct name—and the similarity of the climate of Almeria to many places in Australia, Mr. Castella saw visions of a big export trade being developed in Australia if the variety were planted out in suitable places on a commercial scale.

In presenting his report to the Victorian Government (published in the "Journal of Agriculture" in 1908) Mr. Castella wrote:—

Almeria (pronounced Al-mereea-a) is widely known on account of its fresh Grapes, which, packed in granulated cork in barrels, are shipped to all parts of the world. Scarcely any wine is made, and no Raisins are dried in this neighbourhood, but every available acre, where there is sufficient soil, and where water can be brought to it, is planted with Ohanez vines, which bear the Grapes which have made the port of Almeria famous.

The Ohanez table-grape industry is worthy of serious consideration by Australian vinegrowers. The chief cause which has contributed to expansion of the Almeria trade is the remarkable keeping qualities of the Ohanez Grape—the leading variety cultivated. When packed in cork-dust, it withstands the attacks of moulds, and shipped as ordinary cargo it is transported in good order on voyages of several weeks' duration.

Objection is often taken to it as being leathery compared with many of the magnificent varieties of recent introduction. This is true, but the proportions the industry has assumed, and the way it has displaced others in Southern Spain are proof of its remunerative returns in localities suited to its growth.

As regards markets, we have several advantages over the Spaniards. The six months' difference between the seasons of the northern and southern hemispheres causes our Grapes to ripen at the time of the year when there are no Grapes obtainable north of the equator.

The industry would not have to fear European competition. Our proximity to India, China and Japan, as well as other countries in the Far East, should give an accessible outlet for large quantities of fresh Grapes.

Even now Almeria Grapes are shipped as far as Singapore and Java, where they arrive during the winter months; but from Australia they would be landed in early summer, a period when a brisk demand can be

met. my visit the 1907 shipments had reached the astonishing total of 2,443,333 barrels, and a few more had yet to be forwarded.

The vineyards are situated on the almost level land in the valleys which wind about among the steep rocky hills, following the course of the river, and of the smaller creeks which feed it in winter, though they are dry during the summer months.

### Climate and Soil.

The climate is warm and very dry—so dry that without irrigation the Grape shipping industry would not be possible. I was not able to ascertain the average annual rainfall, but it cannot be much over twelve inches. Last year only 10½ inches were registered, whilst a couple of years back it was only 8 inches. Long periods without any rain are of frequent occurrence.

The soil is a mellow loam, varying a good deal. The geological formation appears to be chiefly limestone of secondary age, though primary slates are also to be found in the neighbourhood. Analyses were not available, but judging from the fact



Port of Almeria, Spain, from whence over 2,000,000 barrels of Ohanez grapes are annually shipped.

reasonably depended upon. The possibilities in the way of shipment from Victoria of fresh Grapes to the Far East are enormous, and requires the serious attention of growers.

In 1900 nearly 900,000 barrels, each containing 50 lbs. nett of fruit were shipped from Almeria, chiefly to England, Germany and America; by 1902 the shipments had increased to over 1,000,000 barrels; and at the time of

that many growers are satisfied with Riparia stock the lime contents of the soil cannot be high. This relative freedom from excess of lime, though the geological formation is a limestone one, is not uncommon if it be hard limestone, and not the soft Tertiary form. The soil, though of good mechanical texture, is not a very rich one. The best shipping Grapes are said to be produced on the poorer soil.

**Reconstitution.**

The Province of Almeria was officially declared to be "Phylloxerated" in 1888, and the vines were then reconstituted. As is so frequently noticeable where vines are allowed to attain large size, the progress of the pest has been comparatively slow—not nearly so rapid as in Jerez or Malaga, where the vines are small

the soil is deep and friable and assisted by irrigation. To see Riparias supporting the enormous overhead trellises or parrales nevertheless surprised me as it is in direct contradiction to the unsuitability of this stock for long pruning, which was so strongly impressed on me in Southern France. Rupestris du Lot is now a good deal used, and well spoken of,



Group of grape packers at Almeria, Spain.

and closely planted. Even at the present time, some parrales (overhead trellises) of ungrafted Viniferas are occasionally to be met with. They are gradually being replaced by grafted vines; although still alive, many of them have suffered so much from the presence of Phylloxera on their roots that they no longer give profitable returns. At one vineyard I visited near the village of Huercal, the substitution was being carried out by intermediate planting of American vines between the old ones. These were to be grafted later, and gradually trained to take the places of the original vine. The considerable distance apart 20 x 20 feet renders such a course possible. Even so, this method is not very satisfactory, and, as might be expected, better results are obtained by rooting out entirely before replanting. The tendency nowadays is to plant the grafted vines somewhat closer than the old vines.

The chief stocks I saw being used were Riparia Gloire, Rupestris du Lot and A.R.G.I. That Riparia should have been used largely at first is not astonishing, for 20 years ago saw the height of the popularity of this species in France; that it is still used at the present time is more remarkable, and is explained by the fact that

especially in drier situations. A.R.G.I. is on all sides considered an excellent stock. The vigorous Ohanez seems to suit it well as a scion, and no trouble with suckers was complained of. On the whole, A.R.G.I. appears to me to be the most promising stock of the three.

**The Ohanez Grape.**

Though several different Grapes are to be met with near Almeria the Casta de Ohanez or Uva de Lonja is by far the most important. It is this vine, and the extraordinary carrying and keeping quality of its fruit that has led to the establishment of the shipping industry for which Almeria is now so well known.

In addition, it possesses two other peculiarities which must not be lost sight of by intending planters. It requires extremely long pruning. The fruit-bearing eyes are situated some distance from the base of the canes. If pruned to short spurs it will prove practically sterile. Several long rods, with an occasional wood spur to enable the shape of the vine to be maintained, are the basis of the method of pruning applied to it.

Another difficulty is due to faulty pollination. According to some, its own pollen is sterile. It is certain that the flower is not a perfect one; the stamens are short and under natural conditions the abortion of a large percentage of the flowers is the rule. This renders artificial fecundation necessary, and Almeria is one of the few localities I visited where artificial fecundation is one of the ordinary vineyard operations. A wild Vinifera bearing male flowers, known as Flor, was largely grown in



Barrels of grapes ready for shipment from Almeria, Spain.

former times to supplement the deficient pollen of the Ohanez.

Bees are scarce in the neighbourhood, owing to the absence of flower bearing vegetation on the barren hills. No doubt if they were plentiful they would greatly assist. In Victoria we may not have the same difficulty to overcome. This peculiarity of the Ohanez is nevertheless worthy of serious consideration, for artificial fecundation in Southern Spain would scarcely be possible with us, at any rate, on a large scale.

#### Training and Pruning.

The system of training the vines on high overhead trellises or parrales is most characteristic, and gives a great charm to the vineyards.

The vines are planted in squares at about 15 x 15, and trained with a straight stem to a height of 7 feet or so. At the top of this stem, the crown branches out in all directions like a huge spider, the main branches and annual rods being supported by a network of wires crossing one another at intervals of about 20 inches. The rods, to the number of 10 to 15, vary from a foot to 6 feet in length, according to the strength of the vine.

The yield of the Almeria vines, when properly cultivated and irrigated, is usually from 7 to 10 tons of Grapes per acre.—(Richter).

#### Irrigation.

The land is all most carefully graded into plots of various sizes, according to its slope; each plot is surrounded by a small dam for irrigation, which is always applied by flooding. The water must be carefully applied, and especially not too near the ripening season, or the quality of the fruit, and more particularly its carrying quality, will suffer. Winter irrigation is largely practised. Care is taken that the sub-soil gets a good soaking either from rain or irrigation. In a normal season one summer watering is given in the month of June (December in Australia)—should the season be an exceptionally dry one, two summer irrigations are given, one early in June and the second a month later. Large sums have been spent in providing storage basins for water. In some places dams have been made across blind gullies, where water is caught and retained for summer use.

#### Cultivation.

One deep winter cultivation is practically all the vines receive. A light harrowing is given after irrigation. From the 15th August to the vintage the soil is not touched. An idea seems to prevail that interference with it during this period would have a prejudicial effect on the quality of the fruit.

Manure is applied, but not in large quantities; over manuring and other cultivation are alike held to reduce quality. Though richer soils yield heavier crops, it is poor deep soils which produce the best Grapes.

**Summer Pruning.**—Disbudding is practised, most of the shoots without fruit being removed. Those bearing fruit are stopped back. Cincturing such as we know, is not practised, though a form of it known as "Capar las Parrales" is sometimes practised. This consists in removing a narrow ring of bark on the shoot of the current year beyond the bunches. It is strange that ordinary cincturing has not been tried; with a variety so prone to faulty setting of its fruit, good results could no doubt be obtained from it.

#### Gathering and Packing.

The fruit is usually gathered rather on the unripe side; it completes its maturity in the granulated cork or "serin" in which it is packed. The Grapes ripen about October, but packing goes on from about the middle of October until Christmas. The packing is in barrels made of thin oak, chestnut and pine according to the quality of the fruit, the best being put up in oak. The standard

#### Ohanez Grapes in Western Australia.

The pioneer of the commercial production of Ohanez Grapes for export was the late Mr. George Barrett-Lennard, of Belhus, Upper Swan, Western Australia, where to-day 75 acres are planted to this variety.

Ohanez Grapes have been successfully exported from this vineyard for many years past, and the prices realised on the markets of the old world have been satisfactory.

Other growers in the Swan district have planted Ohanez Grapes, though the plantation of Messrs. Barrett-Lennard Bros. is the most extensive. For the coming season Western Australian growers of Ohanez Grapes have applied for shipping spaces for over 15,000 cases for the London market.

The photographs published in this issue were supplied by courtesy of Messrs. Barrett-Lennard Bros., of Upper Swan, W.A., same having been obtained by the late Mr. Geo. Barrett-Lennard about the year 1910, when studying the Ohanez Grape industry in Spain.

#### The Ohanez in N.S.W.

In regard to the development of the Ohanez Grape industry in New South Wales, the following information has been courteously supplied by Mr. H. G. Such, Manager of the Griffith Producers' Co-operative Co. Ltd.:—

The Ohanez Grape is largely planted on the Area, both at Leeton and Griffith, and some 200 acres will be in bearing within the next three years. The actual area bearing to-day is not known, but the total crop for last season was in the neighbourhood of 20,000 cases. This crop is found to be the best for export, and markets far afield from Australia are being sought to cope with the crops in sight.

There is no reason why the whole of the Northern Hemisphere cannot be supplied from Australia with Ohanez.

Difficulties are met with in this connection, due to seasonal variations, which sometimes destroy the keeping quality of the Grape. In some years the fruit can be kept for months without any cold storage, and in other years will soften as soon as picked. The prospects for the crop are good provided excessive plantings are not indulged in. There is a limit, however, as the Grape cannot be economically grown except in dry districts, as it is most susceptible to all the mildew diseases.

The experience on the Area is that rod pruning, whilst producing heavy crops, is unsatisfactory by reason of the small berries grown. Most of the principal growers now are adopting spur pruning.

The trellis used is a low one, not exceeding 4ft. 3in. with two wires, but the tendency is to increase the height to within 7 feet.

## QUALITY DEHYDRATORS

J. H. MORTON, A.M.I.M.E.

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size of the barrels is 22in. stave x 12in. at the bung. They contain about 50lbs. net of Grapes, the gross weight being 77lbs.

A smaller barrel, containing 25lbs. net of Grapes, is also used, but not nearly so extensively as the larger one.

The granulated cork is put on the bottom of the barrel, and the Grapes, from which any damaged berries have been carefully removed, are packed in, about three layers of cork being placed at regular intervals and well fitted in. Packed in this way the Grapes will stand a good deal of knocking about; they are said to remain practically unchanged for four to six months.

Where conditions are suitable in Australia for Valensy and Ohanez Grapes they should be cultivated.

There should be enormous possibilities in the way of developing an export trade with the fresh fruit.

**In Victoria.**

In northern Victoria the export Grape has developed to such an extent that there has now been formed the Ohanez Grape Growers' Association, of which the Secretary is Mr. W. F. Flattley, Merbein.

The whole of the Ohanez growers in Australia are organised for the purpose of standardising the pack and regulating foreign markets. At a recent conference, it was decided that for export, the  $\frac{1}{2}$  bushel flat, as laid down by the W.A. Fruit Case Act, should be used only.

For many years this variety was shipped under the name of "Almeria,"

**The  
North and Midland  
Counties of England**

Are directly served by

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OF HULL**

Every modern facility for prompt handling of fruit.

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Australian Apples Sold at Hull in previous seasons brought the highest prices.

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Representative in Australia  
51 Moorabool St., Geelong  
Victoria

but lately the Commonwealth authorities have drawn attention to the fact that this is contrary to international law, and as a consequence all future shipments will be branded "Ohanez."

**Orchard for Sale.**—Mr. D. Williams, auctioneer, Stawell, advises, as per advertisement elsewhere in this issue, having an orchard for sale. The property consists of 70 acres freehold land, 20 acres good young orchard in full bearing. Six-roomed house, with water and gas laid on; also lease for 230 acres given in. Price, £3,000. £500 Deposit. Easy terms. Further particulars are obtainable on application from the above address.

**Queensland.**

**Bunchy Top in Bananas. Pineapple Notes—Budding Mangoes, Deciduous, and Citrus Trees.**

(By Our Correspondent.)

**P**RACTICALLY ALL FRUIT GROWING districts have benefited by more or less heavy rain, and humid conditions have prevailed on coast lands. As a consequence Bananas and other tropical and semi-tropical varieties are making luxuriant growth.

The quality of fruit of Bananas marketed has already shown much improvement. It is noted that in several southern journals prominence is given to advocating the removal of the duty on Fiji Bananas, which, if effected, could only result in Queensland growers going to the wall. If considered desirable to admit the product of coloured labour why not admit the labour and produce the required commodity locally? Both aspects are against the policy of White Australia, which imposes conditions upon the growers which must be reflected in increased prices.

Deciduous fruits marketed from the Stanthorpe district have evidenced much improvement upon last year's supplies. Though odd instances have been noted of the presence of Fruit Fly larvae on the whole, the crop has been most satisfactory, and realised profitable rates. Whether the absence of the fly is attributable solely to local effort, or largely responsible to seasonable conditions with the absence of S.E. winds from the infested lower areas, future experiences only can decide.

With a view to furthering the prospect of entirely eliminating the pest from the district, a Regulation is asked for forbidding the storage in the district of any fruit other than Tomatoes and Grapes after the first week in April.

Pineapples have cropped well, and prices have been better than for some years. A limited number of growers are doing their best to destroy southern markets by forwarding grossly immature fruit. (A few Banana growers appear to be imbued with the same spirit, or otherwise are unable to distinguish between choice and inferior fruit.)

Fair supplies of Pineapples are being delivered at the various factories, but the State cannery is the only one operating for export. It is unfortunate that no standard is provided for canned fruit for interstate markets, consequently the quality does not always suggest preference over the imported article.

It is recognised that fixing the export standard has effected an all-round improvement in preserved fruit sent overseas from this State, and it would be expected that a Common-

wealth standard as that for home consumption would be equally beneficial.

Mangoes have been plentiful this season, but the general quality is inferior. Since Mangoes admit of being budded over—though a greater lapse of time would prevail before re-fruited than applies to most other trees—a general improvement is attainable. A first-class Mango is one of our most luscious fruits—an inferior the most distasteful production.

The long deferred joint investigation into the Banana malady of southern coast district and N.E. New South Wales is expected to commence about the first of this month. The personnel of the committee of investigation suggests a better appreciation of the matter than evidenced by the previous indifferent attempt, entered upon some two years ago, and which merely resulted in holding the matter up for that term—much to the benefit of the "bunchy top," which extended freely.

In the field weeds are luxuriant. On sloping land, with sufficient fall for wash to be effected during heavy rains, eliminating weeds at this time of year is inadvisable; but the planting of leguminous crops—of which Black Mauritius Bean is preferred—is certainly a better method than allowing weeds to develop.

Deciduous trees and citrus may still be budded over, and the operation is, on the whole, more satisfactory than grafting.

Inferior trees of Custard Apple may be similarly treated.

On account of continued dry weather, which, until recently, was rather general, citrus crops are unlikely to be quite up to the average in quantity, but the quality should show improvement.

**Montville.**—The monthly meeting of the Montville Fruitgrowers' Producers' and Progress Association was held in the local School of Arts on February 14th. Mr. M. S. Dart occupied the chair, there being thirty other members present.

**Orange Bug.**—A report was submitted by Mr. T. H. Brown relative to the eradication of the Orange Bug by a spray solution. The spray, in its application, was successful in killing 100 per cent. of the bug in their matured stage, but was somewhat injurious to the foliage of the tree, which trouble the demonstrator thinks will be overcome by making the solution a little weaker.

**A.W.U. Wages Log.**—The matter of opposing the demands of the A.W.U., representing the Rural Workers, was discussed, and the meeting decided to submit to the Council of Agriculture the names of Messrs. Lampton and Goodwin, fruitgrowers, who are prepared to give evidence if required, when the matter comes up for hearing at the Arbitration Court. Three new members were elected, which now

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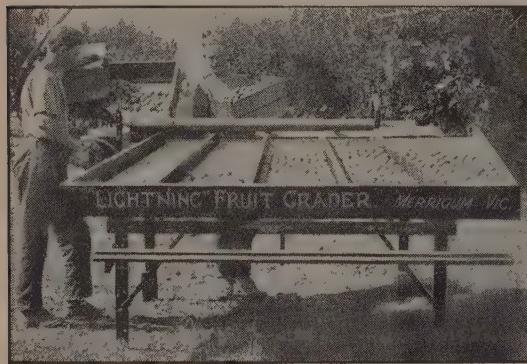
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## The "Lightning" Fruit Grader

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The Machine with an ESTABLISHED REPUTATION and an EVER-INCREASING POPULARITY

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We will be pleased to post you Catalog containing full particulars.  
Made in Nine Models up to 10 Grades. Grades all Fruits—Apples,  
Pears, Oranges, Peaches, etc.

Capacity: From 500 to 1,000 cases per day.

**Prices from £18/15/-**

We have bought the patent rights of the "PENANG" FRUIT GRADER, and have added improvements and are now manufacturing them.

**LIGHTNING FRUIT GRADER Co.**  
109 Cromwell Street, Collingwood, Melb., Vict.

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makes the membership roll 90.

Registration forms necessary to secure a vote to constitute the Sectional Committee were signed by nearly all the members present.—W. E. MURPHY, Secretary.

**Redland Bay (18/2/24).**—To all appearances the crop of Custard Apples will be a record one for quantity, writes Mr. James Collins, Redland Bay. The weather since the New Year has been ideal for the setting of the fruit, just enough moisture and continuous heat night and day, in some instances there is too much fruit set on the trees, and they are still flowering and setting. In a few weeks this fruit will be ready for market, being earlier than usual. The Custard Apple is taking the place of citrus and Pineapples, being practically free of insect pests, and with ordinary care, easy to grow.

The Pineapple has had its day as far as this district is concerned; there are not nearly so many grown as there were a few years ago. This fruit requires new land to thrive well, and where same is available, heavy crops are still grown. The crop for this season will soon be finished; it was not as large as former years.

#### Banana Growers' Conference.

Banana growers at North Arm, Yandina, Golden Valley, Eumundi, and Cooran, recently met and passed strong resolutions condemning the

action of the Committee of Direction in unnecessarily limiting southern agents, and requesting more adequate representation of Banana interest on the Committee.

A large meeting of Banana growers was held at Brisbane on February 15. Mr. L. R. Macgregor presided. The objection to the press being present was overruled. Some plain speaking was indulged in. It was finally decided to leave the matter in the hands of the Committee of Direction.

To fill the vacancy caused by the transfer of Mr. J. M. Ward to Victoria, the name of Mr. Geo. Williams, of the Department of Agriculture, is being favourably mentioned by growers.

#### QUEENSLAND LABOR PARTY.

##### Winning the Land Worker.

(Per Press Association, Auckland.)

The Hon. Mr. Theodore, Premier of Queensland, was enthusiastically welcomed by a large gathering of Labor representatives at the Trades Hall. He gave an account of Labor's access to power in Queensland, and explained how it obtained the co-operation of the farmers through the formation of the Queensland Producers' Association, with 720 branches and a membership of 22,000 working farmers. Then a Council of Agriculture was

formed under the control of the Government. The object was to assist the farmers to solve their farm problems and the marketing of produce, finance in agriculture, education in agricultural science, dealing with pests, etc. This was submitted to the farmers two years ago. Labor had got the support of the producer on the land. The policy was now in operation and working successfully.—"Manawatu Daily Times," 16/1/24.

#### SHOWS TO COME.

Victoria.	March
Diamond Creek . . . . .	8
Somerville . . . . .	12
Ringwood . . . . .	14, 15
Croydon and District, Kilsyth	21, 22
Bacchus Marsh . . . . .	29
New South Wales.	March
Central New England . . . . .	11, 12, 13
Batlow . . . . .	18, 19
Crookwell . . . . .	20, 21
Goulburn . . . . .	20, 21, 22
	April
Orange . . . . .	8, 9, 10
Royal Agric. Soc., N.S.W. . .	14 to 23

We have been notified by cablegram that Messrs. Margetson & Co. Ltd., Fruit Importers and Salesmen, of Covent Garden, London, have appointed Mr. A. J. Walshe, of 71 Collins-street, Hobart, as their Tasmanian representative.

## Fruit Trains.

### Are They a Real Solution of Fruit Marketing Problems?

The running of special fruit trains to country centres has met with varying success, where attempted in Victoria and New South Wales.

Owing to the publicity given to the subject, however, fruitgrowers associations are making enquiries relative to the possibilities of building up a permanent trade in this manner.

In response to an enquiry, the following notes have been courteously supplied by the Manager of the Griffith (N.S.W.) Producers' Co-operative Co. Ltd., Mr. H. G. Such. The information is of exceptional interest, as by careful organisation the Griffith Association has made a commercial success of its fruit trains. Mr. Such writes as follows:—

We have now sent four fruit trains into the country districts, and, speaking generally, these have met with a splendid reception from the country buyers, and have returned remunerative prices to the growers. The details required to be looked into are many and difficult, so that only an organisation loyally supported by its growers and efficiently operating can afford to run the risks attendant on the distributing of fruit in this manner.

The main factors operating against the success are, firstly, the ripening of the fruit has to be anticipated to afford a sufficient supply for the day, as advertising and propaganda needs to be under way a fortnight at least before the fruit leaves. The quantity of fruit that will be absorbed has to be guessed. If too little fruit is taken, that route is injured as buyers will not risk a second disappointment, and therefore a later train is unpatronised. If too much fruit is taken, the surplus at the terminal may be lost, as it will be overripe, and must be sacrificed. Unexpected rain on the day set for the picking and carting of the fruit may result in no fruit being available, whilst bad weather on the day that the train runs will prevent purchasers arriving in sufficient numbers to clear the truck.

It would appear that this fruit distributing method is one which hinges largely upon luck where soft fruits are concerned.

For citrus and some of the tougher summer fruits, like Cling Peaches or Export Grapes, where there is a considerable latitude for carrying, the difficulties are reduced.

Taking it altogether, however, it would appear that except to deal with gluts and peak times, when the fruit sold on the train would perhaps have been destroyed or sold for unremunerative prices, this train distribution does not afford a real solution of our fruit

marketing problems, but is likely to be exceedingly helpful.

We believe that some modification would need to be introduced along the lines or organising in the actual towns touched, so that orders could be collected in advance and delivery accepted by a local agent. In this way the difficulty of ascertaining the quantity of fruit required would be lessened, and the chance of a surplus avoided. We have looked upon these trains this year as purely experimental, and they have proved to have filled a useful purpose in showing us what are the difficulties so that we shall no doubt be able to effect improvements during the next season.

It may interest you to know that we intend trying out long distance distribution on these lines, and contemplate running a truck of fruit, containing Cling Peaches and Grapes along the line between Grafton and Murwillumbah, a distance of over 1,000 miles. In this we have secured the co-operation of the Railway Authorities, who will run the truck behind the mail, the whole distance thus ensuring fast transit.

### ANOTHER ASPECT.

Fruitgrowers at the thriving settlement at Quantong (Victoria) have entered a warm protest against the overlapping of certain fruit trains. This protest has been forwarded to the Chairman of the Victorian Railways Commissioner, Mr. Harold Clapp. The growers state that it has taken them 30 years to build up a trade with fruit shops in the Western District, and that they have supplied 50,000 cases of fruit during the five months, in which they have been distributing this season. This trade has been built up by their own efforts, without Government or private assistance.

The Quantong fruitgrowers emphasise the value of steady and continuous trade, and describe the action of the Railway Department as "unfair competition," i.e., the selling of fruit on "fruit trains" making a shop of the trucks, the unloading of fruit at railway stations, with station masters acting as salesmen.

The Quantong Fruitgrowers' Association requests that the overlapping should cease, as they cannot compete against a Government Department, which action is destroying the connection which has been patiently built up after many years of good service to buyers.

A cablegram is also to hand notifying that Messrs. Gerald da Costa, Fruit Salesmen, whose head offices are situated at Floral Hall, Covent Garden, London, have opened up sales-rooms at Hull and Rotterdam. These branches have been opened up particularly to supply the demand from continental markets.

## New South Wales.

### Murrumbidgee Irrigation Areas.

**Griffith.**—The Griffith Producers' Co-op. Co. Ltd. advise that the Water Commission's large stemmer and grader will be operating this season.

**Cresco super.**—Growers report excellent results. The 22 per cent. super is more economical than the 18 per cent. The former costs £6/11/- per ton; the latter £5/14/- per ton, thus for an increased cost per ton of 15 per cent. the amount of phosphoric acid is increased by 20 per cent.: cartage and spreading costs are also reduced by 20 per cent.

**The Starling Curse.**—The starlings are again active: bird scarers (with crackers) recommended.

**Canning Peaches.**—The local pool is operating. The minimum size for Elbertas is 2½ inches. Such Clingstones as Golden Queen, Phillips, Selma, Pelora, Sims and Levis, will go to Leeton in lug-boxes, otherwise the growers will lose the extra £1 per ton which is being paid by the Leeton Cannery. Other varieties, such as Californian and Pullar's, can go to Sydney or Leeton, although the quantity to go to Sydney is limited.

(Proportions not yet fixed.) Growers are requested to note that the size is as follows:—2½ inches minimum; except Golden Queens, which may be 2 inches.

**Grapes.**—Messrs. Ross Reid Bros., Leeton, N.S.W., report, under date, February 18th, that there are good crops of Grapes of all varieties, principally Sultanans and Black Cornichon at the Leeton end of the Murrumbidgee Irrigation Areas.

Large quantities of wine Grapes are coming into bearing at Yenda and Griffith.

**Prune Growers, please note.**—Prune Growers' Association of N.S.W. is c/o E. E. Herrod, Esq., Secretary, Cathcart House, Castlereagh-street, Sydney.

**English Fruit Farming.**—A complete treatise of the practical and scientific sides of Fruit Farming, by Cecil H. Hooper, M.R.A.C., F.S.I., is now obtainable. This book contains articles dealing with the cultivation of the Apple, Pear, Plum, Cherry, Nuts, berry fruits, etc., also picking, grading, packing, spraying, pruning, experimental work, pollination, book-keeping, and a lot of other useful information. Price, 7/6 posted. Copies are available from the Book Dept., "Fruit World," 9 Queen-street, Melbourne.

## Fruit Fly in Mildura (Vic.)

Speedy Eradication is Anticipated.

### Orchard Inspection and Scientific Research.

It is with regret that we have to record the fact that the dreaded Mediterranean Fruit Fly (*Ceratitis capitata*) has made its appearance in the Mildura fruitgrowing areas in the extreme N.W. section of Victoria.

A determined effort is being made by the Department of Agriculture to eradicate the pest. Mr. J. M. Ward (Superintendent of Horticulture) is personally superintending the operations, and in this he is being aided by practically the entire force of orchard inspectors, who have been withdrawn from other districts for this purpose.

It is confidently anticipated that the Fruit Fly will be eradicated. The terrors of the Fruit Fly are too well known to need lengthy description. The pest is firmly established in Queensland, New South Wales, and Western Australia, but up to the present, the other States have remained clean.

It is of the utmost importance to the State that the Fruit Fly be completely eradicated, as otherwise valuable export markets, which were being developed for the citrus industry, will be closed.

During the past twenty years there have been sporadic outbreaks, but these have all been promptly suppressed. The fly got a footing as far south as Doncaster eighteen years ago, but it disappeared after the first season, there being no continuous supply of fruit in which the pests could be harboured.

But it is different at Mildura. The climate is warmer than at Doncaster, and there is practically a continuous supply of fruits and flower pods, enabling the broods to be carried on without a break.

The Fruit Fly attacks practically all the fruits, including Grapes, also Tomatoes, etc.

Mr. Ward states that last season fully 50 per cent. of the deciduous fruit crop at Stanthorpe, Queensland, was destroyed owing to the ravages of the Fruit Fly.

The pest breeds at an alarming rate. It is estimated that each female fly is capable of laying about 300 eggs in three months, and twelve generations are possible in one year in hot climates. The female fly punctures the fruits and deposits the eggs under the skin: the eggs hatch out in a week or two, and the maggots, after going through their life's cycle, pass through the chrysalis stage into perfect flies ready for more damage.

The fact that the Mildura district is isolated is a good point in favor of eradication.

The official instructions include—

(1) The prohibition against fresh fruit leaving the district, unless stored for three weeks at a temperature of 34 degrees.

(2) Boiling for 15 minutes, or burying three feet deep, all fruits except the main crop of Oranges, Olives, Almonds, Walnuts, and Grapes. The fruits thus to be boiled or buried include Apples, Pears, Plums, Prunes, Figs, Peaches, Tomatoes, Guavas, Nectarines, out of season Oranges, Sevilles, Cucumbers, Paddy Melons, and all berries, such as Rose seeds, Hawthorn and Boxthorn.

(3) Hawthorn and Boxthorn bushes must be cut down and burnt.

(4) The attention and destruction of all fallen fruit, and where lucerne or other herbage is growing thickly around trees, this must be destroyed, and the soil cultivated.

Passengers from Sunraysia districts must not take fresh fruit with them: luggage will be examined.

Border districts, such as Curlwaa, etc., are warned that no fresh fruits are permitted to be brought across the Murray into Victorian Sunraysia districts: heavy penalties for breaches to be imposed.

\* \* \*

At the last meeting of the Victorian Fruitgrowers' Central Association, growers urged that full compensation should be paid to those producers whose crops were destroyed for the good of the State. A committee, consisting of Messrs. Vear, Foster, Bailey and Aspinall, was formed to keep in touch with the whole position.

\* \* \*

At Spearwood, Western Australia, recently the local growers made a combined and determined attack on the Fruit Fly, and by concerted action, completely eradicated the pest.

\* \* \*

Owing to reassuring reports from expert departmental officers in Victoria the projected embargo on the importation into Victoria of Interstate fruit will not be imposed.

\* \* \*

No trace of Fruit Fly having been found at Red Cliffs, permission has been given for Grape shipments to be resumed.

### ORCHARD SPRAYS.

The following fruit tree spraying preparations and appliances are now available to Australian orchardists:—McDougall's No. 2 Fruit Tree Wash (a combined insecticide and fungicide; Katakillia (a powder insecticide), and Derrisine liquid insecticide, a nicotine preparation for destroying biting and sucking insects. Full particulars of these lines, together with Messrs. W. T. French and Co.'s hand spraying appliances, including knapsack sprayers and atomisers, are obtainable from Messrs. Newell & Co., 189 King-street, Melbourne.

# CONSISTENT

# EFFORT

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This is the thought always uppermost in our minds which prompts us to strive to do our best in every sale we make.

It is this consistency of effort which makes us believe we are truly entitled to be called,  
**"One of Sydney's most reliable fruit commission houses."**

# REEDY & LEE

Fruit Merchants  
Commission Agents  
City Markets, Quay St.,  
Sydney.

*"Ask the man who sends to us"*

Victorian and Tasmanian Shipping  
Number 173

## FIGHTING THE FRUIT FLY.

"Destroy infected fruit before larvae escapes, and lure the female fly before the eggs are laid."

(By Our Queensland Correspondent.)

**I**N FIGHTING the Fruit Fly every agency which assists in the destruction of the pest is of value to the fruit industry.

Here are some interesting details. Harvey's Fruit Fly lure is a proprietary preparation, put up by A. W.

## MARGETSON & CO. LTD.

### Fruit Importers & Salesmen

30 James St. and James  
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COVENT GARDEN  
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TASMANIAN AGENT  
**A. J. WALSH,**  
41 Collins Street,  
HOBART.

Harvey, Clayfield, Brisbane; Taylor and Colledge, wholesale chemists, Brisbane, being agents. Two distinct lines are put up (one for deciduous fruits and the other for citrus), in gallon,  $\frac{1}{2}$  gallon, and quart tins, and stocked by principal seed shops.

Both lines have, during the last season, been proved effective in luring the female Fruit Fly (*chaetodacus Tryoni*) to destruction before depositing her eggs; to the male specimen it seems rather less attractive.

In Mr. S. Schultz's Peach orchard, at Nudgee, and Mr. Paget's orchard (citrus), results were satisfactory.

The method of application is by adding water—3 parts of water to 1 of lure—prior to placing a small quantity of the dilute mixture in the retainer, which forms the base of the glass fly trap used. When diluted the lure is supposed to retain its qualities for 4 days, but it has been found that the addition of a few drops of the undiluted lure to the solution in use at the end of the second or beginning of third day will add to its efficacy.

The traps are ordinary glass bowls, with a bottle neck (stoppered), and a wide base, with an incurved margin to the large opening beneath, whereby the fly is admitted. The raised margin around this opening retains the lure between this and the side of the bowl. The fly, on entering, rarely attempts a downward central exit, but working on the glass sides eventually gets into the solution and is drowned.

Traps are obtainable in Brisbane—retail, 2/6 each.

Traps were distributed throughout the orchards at the rate of one to 12 or 15 trees. This would admit of some extension, but much depends upon immediate local circumstances.

It is also found that in higher altitudes the dosage should be slightly increased. Better results are also obtained by having the trap stationary, than where hung by the neck, so it may swing with the breeze.

A piece of flat board nailed to the top of a stake driven into the ground was used for the purpose, in the shade, and at a height so that the neck of the trap is about the height of the lower branches. The flat board will admit of the flies settling thereon, and the legs of the trap will maintain this sufficiently high for free access of the fly.

Unfortunately, Queensland is liberally endowed with various types of Fruit Fly, the majority of which, however, confine their attentions to indigenous fruit, but the universal pest named after Mr. Tryon spreads its attention over almost the whole range of cultivated fruits.

For some unexplained reason the Mediterranean Fly, though frequently imported in southern stone fruits, has never obtained a foothold.

That the general depredator can be coped with by the application of intelligent means has been demonstrated in the freedom from the maggot in Stanthorpe fruit this season.

Professor Goddard and Messrs. Jarvis and Perkins, Entomologists, have been engaged on the problem for about 12 months, and their consensus of opinion is that the fly does not winter in the district, also that it is not capable of providing its own transport from the lower areas.

To guard against the possibility of pupae surviving through the winter a request has been submitted for a Regulation that all fruit other than Grapes and Tomatoes, must be sent

out of the Stanthorpe district by the middle of April.

On the coast lands the ravages of the fly vary according to weather conditions, humidity favouring its rapid multiplication. In a very dry season it may be almost entirely absent. (Stanthorpe has experienced an exceptionally dry season, and changed conditions may present a less favourable aspect).

Nearly all infested fruits are attacked about a week prior to ripening—the female with its pointed ovipositor puncturing the fruit and depositing several eggs in each punc-

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Reference—Satisfied Growers  
in all States.

ture. These hatch, or become active as the fruit approaches maturity, ripening being accelerated in infested specimens (in citrus ferment is originated).

Possibly 10 per cent. of fruit remains on the tree after the larvae has developed, and escaped to the ground, but the majority fall and the emerging larvae burrow a few inches into the soil, there to pupate, and in about a fortnight to emerge and carry on the work of devastation.

In districts where indigenous fruits have been eradicated, there should be no insurmountable difficulty in at least keeping it in subjection, but whilst so many valueless exotic trees are retained to maintain the supply, this is not reasonably possible.

The gathering, at least once every 24 hours, of all fallen fruit, and destroying by boiling or burying beneath 24 inches of soil, will result in the destruction of successive broods of the pest, and has been practised with much benefit in fruitgrowing districts, but unfortunately sufficient

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account sales returned.  
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Representatives in Victoria  
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International Fruit & Mercantile Co.,  
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indifference is generally present to the extent of nullifying the full effect.

Though temperate fruits are attacked in comparatively early stages in the southern part of the State, tropical varieties, particularly Bananas, must be in ripe condition to invite attack.

Various repellants have from time to time been mentioned, and many applied, but results are partial and unreliable.

Destroying, if possible, all infested fruit before the exit of larvae, and utilising an effective lure to trap the female fly before she has accom-

plished any damage, are at present the only measures that can be confidently recommended.

## Western Australia.

The estimated exports from Western Australia are approximately 260,000 cases.

The projected shipping programme is as follows, as per advices from Mr.

### Fremantle.—

Feb. 20th	Demosthenes	3,000	cases
28th	Esperance Bay	23,500	"
Mar. 12th	Otira	27,933	"
10th	Mooltan	5,000	"
17th	Moreton Bay	21,105	"
3rd week	Ayrshire	16,404	"
Apr. 7th	Maloja	5,000	"
8th	Bendigo	24,000	"
24th	Jervis Bay	21,255	"

### Albany.—

Mar. 1st	Anchises	10,000	"
15th	Baradine	25,792	"
23rd	Ayrshire	14,500	"
Apr. 8th	Bendigo	12,541	"

### Bunbury.—

Mar. 10th	Boorara	25,000	"
Apr. 10th	Bakara	24,520	"

## AUSTRALIAN FRUIT EXPORT.

### Hobart.

During February the s.s. "Anchises" and "Medic" sailed from Hobart for Liverpool, the former with 15,698 cases of Apples, and the latter with

### Date

Arriving.	Loading Port.	Steamer.	Discharging at
Mar. 5	Beauty Point & Hobart	Ayrshire	Manchester
8	Beauty Point	Telamon	Hull
22	Beauty Point	Bakara	London
29	Hobart	Argylshire	Liverpool
Apr. 7	Hobart	Surrey	Manchester
8	Beauty Point	Orestes	Hull
14	Beauty Point & Hobart	Port Chalmers	London
26	Beauty Point & Hobart	Berwickshire	Manchester/L'pl.

## THE LATE J. CRONIN.

### Movement to Perpetuate the Memory of a Noted Australian Horticulturist.

For some time past the idea has been simmering for organising a meeting to consider a testimonial to commemorate the life and work of the late Mr. J. Cronin, previously Curator of the Melbourne Botanic Gardens. The Nurserymen & Seedsmen's Association took the initiative, and in conjunction with the National Rose Society, a meeting was called jointly under the patronage of the Lord Mayor of Melbourne (Cr. Brunton) at the Town Hall, on 30th January, 1924.

Resolutions were adopted as follows:—

"That this meeting affirms the desirability of perpetuating the memory of the late Mr. J. Cronin."

"That a Committee of seven be formed, with power to add, for the purpose of collecting funds to

Geo. Wickens, Officer-in-Charge Fruit Industry.

This programme is provisional: quantities, dates, etc., may be altered slightly as the season advances:—

**Grape Export.**—The quantity of Grapes exported from Western Australia for the year ended 30th June, 1923, amounted to 15,843 cases.

20,010 cases of Apples and Pears. From Beauty Point the "Boorara" sailed, carrying Apples for discharging at London.

The following alterations will be noted in the programme published in our last issue:—

Date	Arriving.	Loading Port.	Steamer.	Discharging at
Mar. 5	Beauty Point & Hobart	Ayrshire	Manchester	
8	Beauty Point	Telamon	Hull	
22	Beauty Point	Bakara	London	
29	Hobart	Argylshire	Liverpool	
Apr. 7	Hobart	Surrey	Manchester	
8	Beauty Point	Orestes	Hull	
14	Beauty Point & Hobart	Port Chalmers	London	
26	Beauty Point & Hobart	Berwickshire	Manchester/L'pl.	

consider the form the memorial should take, and to report to a future meeting."

Mr. Burbury reported that £11/5/- had already been subscribed by the fruitgrowers.

A vote of thanks was accorded to the Lord Mayor for the room, and for his kindly interest in taking the chair.

It was decided to send subscription lists to all who were present.

## TABLE LANDS.

Mrs. S. Abbott, Table Lands, Morriston, Victoria, writes:—"I suffered a great deal of agony from indigestion and severe pains after eating until I tried your celebrated A.M.S. remedy. I had only taken two bottles when I got relief, so I can thoroughly recommend it to anyone suffering from this distressful complaint." A.M.S. is sold by all chemists and country storekeepers at 3/-, by post 3/6, and is manufactured by T. A. Dickson, chemist, Geelong.

## Victoria

## VICTORIAN FRUITGROWERS' CENTRAL ASSOCIATION.

The Quarterly Council Meeting with the Victorian Fruitgrowers' Central Association was held at Melbourne on February 19th. Mr. F. W. Vear, Vice-President, presided.

**East Burwood Association.**—Applause greeted the reading of the letter from the East Burwood Fruitgrowers' Association, enclosing cheque for £26/15/-, being affiliation fee for 107 members, at 5/- each.

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Prompt Advices of Sales  
—CHEQUES WEEKLY—

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Tasmanian Representative:

**W. D. Peacock & Co. Ltd**  
PRINCES WHARF, HOBART

Shipping Number 418.

**State Fruit Advisory Board.**—As Mr. J. Oldham had resigned, two nominations were received to fill the vacancy, viz., Messrs. Aspinall (Metropolitan Association), and W. E. James (Harcourt). On taking a ballot, the voting was equal. The Chairman therefore drew lots, and declared Mr. Aspinall elected.

In thanking the meeting, Mr. Aspinall stated that he did not know if the State Advisory Board could do much good, but it could certainly do a lot of harm. It would be his duty to reduce the harm as much as possible.

**Producers' Defence Fund.**—Mr. J. H. Lang reported that the expenses of the recent arbitration case, totalled £200. The Growers' Committee had

£40 in cash and promises, and £50 was expected from the Rural Defence Fund. Mr. Lang submitted that the whole of the expenses should come from this Defence Fund. This matter was being followed up. Report received.

**Unreliable Market Reports.**—Attention was directed to unreliable fruit market reports in the daily press. It was decided to request the Wholesale Fruit Merchants' Association to furnish reports.

**Woolly Aphis.**—Mr. Watt, Hastings, drew attention to the increase of Woolly Aphis in fruit trees, and suggested the Government research into this matter.

**Empire Exhibition.**—The Secretary reported that fruit was being supplied as follows:—Apples, 384 cases; Pears, 144 cases; Plums, 36 cases. Same being received from Harcourt Fruitgrowers' Association, Harcourt Fruit Supply Company, Narre Warren, Ringwood, Pakenham, Mount Waverley, East Burwood, Tyabb, Peninsula Packing Co. and Somerville.

**Fruit Fly.**—Messrs. Tully, D. James and Foster urged payment in full to growers whose fruit was destroyed. Mr. Thiele trusted that fruit would not be prohibited from the other States, as the interchange of products was essential to maintain interstate trade in fruit. A committee was formed to investigate the whole position and report.

## Shepparton.

**Peach Crop.**—Nicholls' Cling just harvested; fair crop, and much less Rutherglen Fly than other varieties. Palmerston a good crop, but some loss with the Rutherglen Fly. Goodman's choice crop almost entirely ruined with Rutherglen Fly. Pullar's not so bad with Rutherglen Fly as Goodman's, but heavy loss notwithstanding.

Shepparton orchardists have been very unfortunate with Goodman's Choice. They were strongly advised by the cannery to plant this fine Peach in preference to all others. Now they are in bearing and the cannery is not able to handle them for the second year in succession, on account of the large quantity of Pears waiting processing. While we believe that the cannery is the salvation of the district, it is hard that other districts, which are not burdened with calls on cannery shares, should be able to get all their fruit processed while we, who have to meet these calls regularly, cannot do so.

**Grapes.**—Waltham's mostly. Fair crop, with some Black Spot.

**Mildura Co-operative Fruit Co. Ltd.**—Successful annual meeting at Mildura on February 2nd. Interesting details will be published next issue.

## APPRECIATION.

Pomonal, via Stawell, Vic.  
The Manager, "Fruit World."  
Kindly find enclosed postal note for  
8/6, being payment for one year's

**T. STOTT & SONS**  
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subscription in advance. Wishing you further success during the coming year with your valuable monthly book.

E.B.

1/2/24.

## Working Bee at Croydon.

In order to enlarge the scope of the trading operations of the Croydon Orchardists' Co-operative Association Ltd., a working bee was held on 7th February, when extensions to the trading shed were made by the voluntary labor of shareholders, the idea being to add thirty feet on to the present 40ft. shed, to enable the Association to stock extra lines of goods and to conduct a weekly delivery of goods to shareholders.

There was an attendance of about 30 men who responded to the call, and under the supervision of a skilled carpenter, the new building was erected. The ladies gave valuable assistance in providing refreshments.

The Croydon Orchardists' Co-operative Association has been established for seven years, and has had its ups and downs, and the directors appreciate the improvements in the Association's affairs since the appointment of Mr. W. E. Pratt as Secretary, some three years ago. The Association is now supplying shareholders with spraying materials and other lines needed by growers, and by buying in bulk the Association can supply

as to the standing of the clients. This precaution has eliminated all bad debts.

The Directors have in mind the possibility of running fruit trains by arrangement with the Railway Department.

The Directorate of the Croydon Orchardists' Co-operative Association Limited is as follows:—Messrs. A. J. Jenkin (Chairman), H. Chandler and J. E. Small, with Mr. W. E. Pratt as Secretary.

The growers present at the working bee were addressed by the Honorary Minister in charge of the Fruit Industry, the Honorable M. E. Wettenhall, and the Superintendent of Horticulture, Mr. J. M. Ward.

## ORGANISING VICTORIAN FRUIT-GROWERS.

## Statement by Minister.

Speaking at Croydon (Vic.) during a working bee organised by the Croydon Orchardists' Co-operative Association Ltd., the Hon. M. E. Wettenhall, Assistant Minister of Agriculture, whose special care is the fruit industry, outlined the policy



Working Bee extending Croydon Orchardists Co-operative Association's shed.

the growers with goods at a lower cost, and at the same time retaining a profit to pay for overhead expenses.

The other activities of the Association include the running of a packing shed and the organising of deliveries of fruit to the Victoria Market. Instead of growers having to cart their own fruit into the market, it is delivered to the Association's packing shed, where delivery is arranged by means of motor trucks and other vehicles three times per week.

The country order trade has been successfully inaugurated in the supply of fruit direct to the fruiterers in the country towns. Before supplying fruit to country shops, inquiries are made through the company's bankers

which he advocated as the best for the industry.

(1) **Grading Regulations**,—same as the Commonwealth export regulations, the number of fruits in each case to be stated thereon;

(2) **Fruit**, such as Apples, Pears, etc., to be sold retail by the dozen instead of by the lb.

(3) A registration fee, 1/- per acre—80,000 acres at 1/- per acre would bring in £4,000, which would enable the industry to organise.

Mr. J. M. Ward, Superintendent of Horticulture, briefly addressed the growers. He emphasised the importance of standardised grading and packing, and was hoping that instructional classes would be commenced in the very near future.

## MILDURA.

## RECORD CROP OF VINE FRUITS.

With regard to the crops of vine fruits at Mildura, Vic., Mr. A. S. Hopkins, General Manager of the Mildura Co-operative Fruit Co. Ltd., writes as follows:—

The crops of Currants, Sultanas, and Lexias are the heaviest known in the history of the district, and are of excellent quality. Harvesting has commenced in some quarters, and by the 25th February all growers will be engaged in getting their crops off.

Experiments are being made in various directions with a view of getting better color for Sultanas to meet the demand for color which is the dominant factor regarding price on the London market.

As far as Currants are concerned, we have nothing to learn, as our Currants are generally recognised on the London market as being the finest quality in the world.

Growers are also seized of the importance of getting a higher class quality Lexia. Meetings have been held in the district lately where suggestions have been made for doing this. Growers generally realise that in order to get the best price for their fruit, they must improve their methods of drying and packing.

FRESH GRAPE DELIVERIES.  
Progressive Methods of Red Cliffs  
Returned Soldiers.

Returned soldier fruitgrowers at Cliffs (Vic.) recently commenced an excellent delivery system for fresh Grapes.

Cartons containing 6lbs. of choice Muscatel Grapes were sold at 2/- each at railway stations and depots. The price delivered to the suburbs was 2/6.

The idea of receiving choice fruit in original packages without undue handling, the fruit not being exposed to dust or flies was cordially appreciated by the public, and a big trade is springing up.

**Hailstorm in Goulburn Valley.**—Reports to hand indicate that the violent hailstorm on February 19 practically destroyed the crops of canned Peaches in the Kyabram and Merri-gum districts.

## VICTORIA.

## Dehydration at Horsham.

The prosperous district of Horsham, in the Western District of Victoria, is to possess, amongst its other industries, a modern dehydration plant for dealing with fruits and vegetables, which are produced abundantly in this locality. Mr. A. F. Spawn, who was the founder of the Riverside Irrigation Colony in 1890, is in charge. Enquiries are also being made as to the possibility of installing a cider mill.

The development of these enterprises will be followed with keen interest.



SULPHATE OF AMMONIA ASSOCIATES "QUALITY" WITH  
"QUANTITY."

favored several small dressings in preference to one large dressing.

Early Spring is a long way off, but good advice is seasonable at any time.

The Autumn application of fertilisers will soon be interesting Citrus growers, who are reminded that SULPHATE OF AMMONIA is still the cheapest and best source of nitrogen in Australia.

*Write for Sulphate of Ammonia literature to:—*

THE AUSTRALIAN SULPHATE OF AMMONIA PROPAGANDA COMMITTEE,  
360 Collins Street, Melbourne, Vic.

N.S.W. and Queensland: The Australian Gas-Light Co., Haymarket, Sydney: The Broken Hill Prop. Co. Ltd., 28 O'Connell St., Sydney; The North Shore Gas Co. Ltd., 193 Alfred St., North Sydney.

Victoria and Tasmania: The Metropolitan Gas Co., 196 Flinders St., Melbourne; The Broken Hill Prop. Co. Ltd., 320 Collins St., Melbourne.

South Australia and Western Australia: South Australian Gas Co., Waymouth St., Adelaide.

AT a recent Conference of the River Murray branches of the Agricultural Bureau of Sth. Australia, Professor Perkins was asked by the Renmark branch:

*"What is the right time to apply SULPHATE OF AMMONIA to the soil?"*

The Professor replied that under ordinary conditions applications should be made in EARLY SPRING when the trees or vines were about to shoot. He

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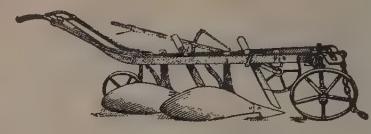
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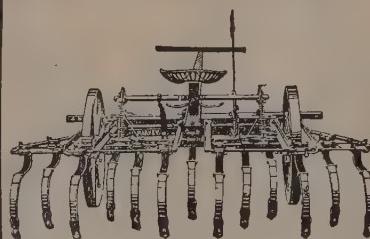
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With shifting or fixed handles. Made in  
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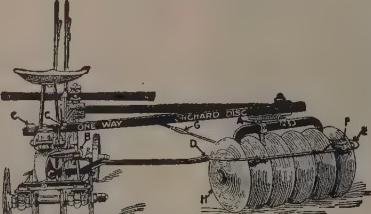
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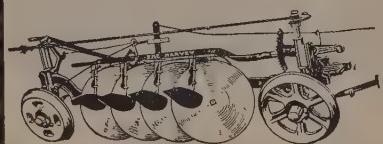
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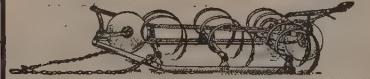
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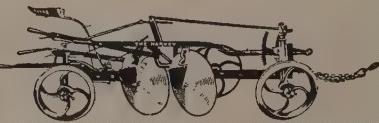
4-FURROW POWER LIFT TRACTOR PLOW.



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Write for New Illustrated Catalogue

### Dried Fruits in England.

A N INTERESTING REVIEW of the past dried fruit season in England is to hand from Messrs. J. C. Houghton & Co., 1 Temple Court, Liverpool, England, which reads as follows:—

#### Currants.

Looking back upon the events of the past season, the outstanding feature which forces itself upon our notice is the extent to which trade has been influenced by the sharp, and at times even violent fluctuations in the Greek exchange, a very disturbing element which has made anything in the nature of stability of markets quite impossible. In the early days of September considerable excitement was caused by the alarming Graeco-Italian crisis which at one time looked like developing into actual hostilities, and this period of ferment provided an excellent opportunity for holders of old stocks to dispose of the fruit to considerable advantage. Their gain was, however, secured at the expense of future trading, for its adverse influence was very marked when the first arrivals of new fruit came to hand, this being followed by demoralisation of the exchange rates in October, which brought about a distinct fall in values, the brunt of the decline being felt by the commoner grades. Vostizza withstood the pressure remarkably, and even stiffened somewhat in many instances.

Domestic politics provided the next vicissitudes, the general election campaign which was so unexpectedly precipitated upon the country in November being a potent factor in reducing the demand, and this was unfortunate, coming just at the time when high hopes were entertained of a final spurt for the Christmas trade. The decisive defeat of the Government in response to the challenge evoked a very reactionary tendency, but the prevailing gloom has to a considerable extent been dissipated by the success of the Venizelists in Greece. The return to his country of this powerful personality has wrought a most beneficial effect on the financial situation there, exchange rates rising sharply with the inevitable corollary of a corresponding advance in the price of the commodity. Many holders have received cables advancing values by several shillings, the year's closing quotations being:—Pyrgos, 44/-; Amalias, 46/-; Zante, 44/- to 46/-; Gulf and Panariti, 48/- to 55/-; Vostizza, 60/- to 72/-; Cleaned Provincial, 45/-; Cleaned Gulf and Patras, 48/- to 50/-; Australian Currents selling slowly, 2 Crowns at 53/-, 3 Crowns at 58/-.

#### Raisins.

Valencia.—The early estimates of a small yield, due to excessive heat and lack of moisture during the critical maturing time, were fully corroborated when the normal period for

the season's commencement came round and nothing was available for shipment; in fact, so late was the start that the whole season's business was concentrated within a few weeks embracing the latter part of October and the first portion of November, when extreme prices were realised, ranging as follows:—Half-boxes, 50/- to 57/6 for inferior, and 60/- to 70/- for good. Quarter-boxes, 57/6 to 65/- for inferior, 70/- to 80/- for good, and up to 95/- for fine. Seedless, Common, 45/-; Ordinary, 55/-; a few really good, 70/-. The bulk of the fruit proved disappointing, being small and unattractive.

**Cape Raisins.**—Buyers realising the position as regards Valencias, evinced an increasing interest in the colonial fruit, and prices steadily appreciated. Sales in August were from 44/- to 48/-, finishing in December with keen demand at:—Fair average, 55/- to 62/-; good, 60/- to 65/-; pockets, 3rd grade, 42/6.

Australian Lexias also benefited, values advancing from 42/6 to closing quotations:—2 Crowns, 52/-; 3 Crowns, 58/-; 4 Crowns, 60/-.

#### Sultanas.

It was felt that with the heavy stocks held in United Kingdom new fruit would have to be on a decidedly lower range of values than those ruling last season. Considerable progress was made in old fruit at falling prices, prior to the arrival of the "Cressado," with the first of the new crop. This cargo was quickly disposed of at 64/- to 75/-, while old Smyrnas sold at 50/- to 60/-, and Old Greeks at 50/- to 52/-.

Further arrivals were quickly disposed of at prices ranging from 59/- to 65/- for ordinary quality, and up to 72/6 for fine. At one period, aggressive selling forced rates down, and some really excellent quality was sold at 60/-. Later, buyers realised the meagre quantity available, and with a revival of demand values quickly took an upward turn, fine grades especially being enquired for, advancing from 70/- to 80/- for good to fine, and from 100/- to 108/- for a few outstanding parcels of fine bleached. A very large business was transacted in good average qualities for forward shipment. Boxes of cleaned from 32/- to 35/- c.i.f., and

bags uncleansed from 27/6 to 30/- c.i.f. Old fruit continued to be forced for sale, and Smyrna fruit sold at 40/- to 45/-, Greeks at 40/- to 43/-.

Greek New Crop were in small supply, and were difficult of sale at 60/- to 65/-, being lacking as regards their usual attractive appearance.

Latest report from Smyrna advise that only 6,000 tons remain, also that the market is strong, with upward tendency.

**Afghans.**—These have depreciated in value, prices ranging for Red from 38/- to 32/-, latest sales 26/6; Yellows, 55/- down to 40/-.

**Australians.**—In view of the position, holders followed the market to meet competitors, selling in August at 70/- to 75/-, recent sales having been 2 Crowns 48/-, 3 Crowns 50/-.

Capes were difficult to move; appearance being unattractive. Sundried declining from 57/6 to 45/-, and bleached from 60/- to 45/-.

#### HOW TO DRY FIGS.

Figs for drying should be thoroughly ripe, the fruit being left on the tree until it bends over on its stem and feels soft and flabby to the touch. Before being subjected to the actual drying process, the Figs should be dipped in a weak caustic solution, made by dissolving about 1 lb. of caustic soda in 20 gallons of water. The period of immersion should not be more than about 3 seconds. The fruit should then be removed, allowed to drain, and placed on wooden trays.

If a bright colour is desired the fruit should be treated with sulphur fumes (states the N.S.W. Department of Agriculture). A simple method of fumigation is to obtain a wooden case, large enough to fit over the trays of Figs when stacked. Place the trays one on top of another on the ground, making sure that air can circulate freely around each tray and that the fruit is not crushed, and cover the whole with the inverted case. Tunnel an entrance beneath the box, place in this hole an iron jar containing burning sulphur, and allow the fumes to be generated for about thirty minutes. If there are cracks in the box a bag or some other covering should be thrown over it to prevent leakage of the fumes. Drying, provided that the heat of the sun is not too intense, should immediately follow this sulphuring.

**Manuring.**—"The Science and Practice of Manuring" is an English publication by W. Dyke, F.R.H.S., Commercial Horticulturist, with introduction by J. Wright, V.M.H. It contains a vast amount of information, including History, Plants and their food, Crops, Soil Fertility, Fertilisers, etc. Price, 3/- posted. Obtainable from the Book Department, "Fruit World," 9 Queen-street, Melbourne.

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## Latham Dehydrators

The Widest Fruit Drying Experience in the world is behind these plants. The best possible recommendation is the extent of one's patronage. My plants attract by far the largest drying business in the Southern Hemisphere.

#### Some Installations

Purchaser	Principal Fruits
Merbein Dehydration Trust, Mildura	Sultanas
Tasmanian Dehydration Pty. Ltd. Bridgewater	Apricots Prunes Apples
Charles Martin, Yackandandah	Prunes
Swallow & Ariell Ltd. Port Melbourne.	Carrots Turnips Cabbages, etc.

#### Lemon Processing Plants.

#### Dried Fruit Graders

#### Dried Fruit Boxing Presses

#### Apple Slicing Machines

Beltng Pulleys, Shafting, Bearings, Engines and Boilers, Cranes and Hoists, Piping, Trucks, Conveyors, Thermometers, Fruit Trays etc., etc.

**D. J. LATHAM**  
157 Queen Street,  
MELBOURNE,  
AUSTRALIA.

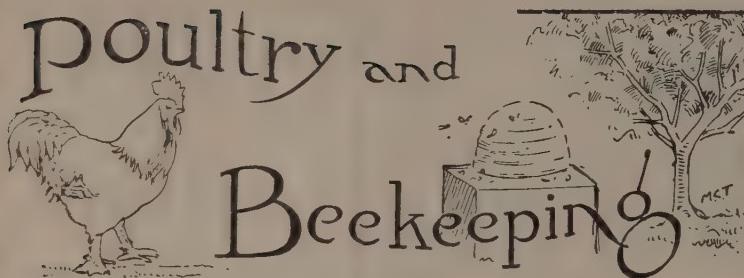
## Sound Citrus Proposition

For Immediate Sale

OWNER GOING ABROAD.

Choicest Land in District.  
Five-Roomed House, with every convenience.  
Ideal Situation. Splendid Prospects.  
"CITRUS," c/o W. B. CRANG,  
Land Agent,  
WENTWORTH, N.S.W.

# Poultry and Beekeeping



## Poultry Notes.

(By Ian P. Hamilton.)

### Avoid Over-Fattening Breeders.

**I**T IS A GREAT MISTAKE to allow the breeding birds to become over fat. Too high feeding, the use of oil cake to excess, or other, fat producing foods in an endeavour to force the winter egg production, will often lead to the storing up of too much internal fat.

The results are lowered percentage of fertile eggs, and a big percentage of eggs which do not hatch.

From the point of re-production the over-fat hen is a diseased hen. The accumulated fat seriously impairs the proper functioning of the organs of reproduction. An acid condition of the oviduct becomes common, and this means infertility.

The observant breeder will know that his hens are too fat if he notices the slightest sign of a ridge round the eggs, or if they are in the least degree misshapen.

It is not an easy matter to bring the hens back into condition again. Lessening the amount of food, or using epsom salts will stop egg-production before the masses of fat disappear, due to the nature of the fat deposited.

It should be remembered that in breeding you aim at quality, not mere numbers. Much depends on the condition of the breeding stock. Grain in variety and very little mash, but a fair amount of green food, and a little animal food may give fewer eggs, but you will get better chickens—500

of which will produce more good adults than 700 chicks from over-fed hens.

With the modern highly-bred commercial fowl the hens are often too fat, while the extra gallant male fusses over his mates and neglects to obtain his fair share.

Always ascertain, by handling, the actual condition of your breeding male birds, and, if necessary, feed them separately.

### KEEP DOWN EXPENSE.

One of the most important factors in making poultry pay is to keep the expense of feeding, housing, and attendance down to the lowest reasonable minimum. This applies particularly where the number of fowls is very large.

When poultry are run as a source of profit it should be remembered always that a penny saved is a penny gained. Make the most of all food or grain purchased by cooking or steaming.

Bullock's livers and other animal food invariably give better results when so treated.

The water in which the substance is boiled makes an excellent liquid for mixing the moist mash, and the liver itself is easier to assimilate when cooked and chopped finely.

When crushed grain is used, it should be scalded or steamed before being fed to the stock. The moisture will take up all fine particles, and render them palatable when in other ways they would be wasted.

Lucerne chaff should be scalded with boiling water for at least 12 hours before it is used.

The top of the vessel should be closely covered so as to keep in the steam.

## Bee-keeping.

**T**O MAINTAIN a desirable degree of vigour in the hives it is necessary to see that the queen bee is doing her duty. The superiority of Italian bees is so pronounced that it is unprofitable to keep other kinds in the apiary.

Some of the queen bees become unprofitable in a few months, and their activities should be watched closely so that replacements may be made as soon as it is necessary to do so.

When a queen bee has to be replaced, she should be removed from the hive before the new queen is introduced or a ripe queen cell is inserted.

The new queen must be placed in an introducing cage, which is put in the hive so that the bees may release her by eating the candy out of a hole in the introducing cage. At times it is difficult to find the old queen, and the use of smoke may be necessary.

After the colony has been smoked lightly at the entrance, the bee-keeper should raise the cover and blow a puff of smoke on the top of the frames. Remove the cover and gently take the combs out singly. Inspect each comb, and if the queen is not there place it and the adhering bees in a fresh hive alongside. If the queen is not found on the comb she will probably be on the side or floor of the hive.

2 DAY OLD CHICKS	
Blk. Orp., White Leghorn	£6/6/0 per 100
	£3/10/0 per 50
	18/- per doz.
Good Laying Strain.	
Order at Once.	
Delivered anywhere by rail.	
R. STEPHENS,	
Goodwin Poultry Farm,	
We Pay Freight.	Blackburn, Vic.

## STONE FRUITS CITRUS TREES and QUALITY ROSES

### BEFORE PURCHASING

for hardiness, healthiness, and vigor. They will jump from the start and bring profit to the grower. Our stocks are excellent and prices right. Special attention is given to packing.

## A Good Start means Everything!

LASSCOCK'S NURSERIES      Henley Beach Road,  
LOCKLEYS, STH. AUSTRALIA

# REAP THE LAST OF THE EGG HARVEST

The letters reproduced below tell you how you can reap the last of the Season's egg harvest; how you can be sure that when your hens do fall into the moult they will moult quickly and come on to lay again when eggs in other Poultry yards are scarce!



Now is the time to start using Karswood Poultry Spice (containing ground insects). Under the strain of continual egg laying during the last few months your birds will shortly commence to "let up" in order that they may enjoy the resting period which wise Nature has decreed. At this time of the year those birds which have laid well need an innocuous tonic which will enable them to complete the work of egg laying, secure the utmost advantage from the moult and get down to the serious business of "profit earning" again with the least possible delay.

False, premature or prolonged moulting spells disaster to the profits your birds have already made. Housing, caring for, and feeding birds which hang in the moult all make for extra cost which can be avoided by the use of Karswood Poultry Spice—a tonic food which is guaranteed to be harmless. It contains no Gentian, No Chillies, No Capsicum, No Cayenne, No Ginger, nor any other injurious ingredients. It DOES contain dried and ground insects rich in natural assimilable phosphorus. These tonic properties make healthy birds—enrich the blood—tone up the nervous system so that more eggs are produced by natural means. Karswood is endorsed by such men as C. A. House and other World known Poultry breeders and is used by more than 500,000 Poultry Keepers every day in the year. Read the letters from Australian users set out below and resolve that you, too, will make the test that "puts the profit into poultry keeping." Remember, Karswood Poultry Spice costs only a half-penny a day for every twelve birds, and is guaranteed to be non-injurious. Read these letters:

### "AGAIN LAYING HEAVILY."

9 Austral Terrace, Malvern, S.A.

Dear Sirs,—

I would like to inform you of the results I have obtained from using Karswood Poultry Spice, I was first informed of this Spice by a friend of mine, who strongly advised me to use it during the moult period. I was somewhat dubious at first in using it, as I was not a believer in spices for fowls, but after seriously considering it on account of the scarcity of eggs, I tried a packet and am glad to state

that I have had wonderful results from it. After using it a fortnight you could see a wonderful improvement in the condition and plumage of the birds, it having considerably assisted them through the moult and actually started them laying in the middle of it. After using several packets of Karswood and when my fowls were laying heavily, I decided to leave off Karswood but after a few weeks my eggs decreased 50 per cent., I again decided to test the qualities of Karswood and glad to say that after a few days use my fowls were again laying heavily.

I am writing this to you as I feel that you have given to the poultry keeper a chance in obtaining good results from their fowls, and to Karswood must be given the credit of reducing the usual shortage of eggs, as you must know, not prevalent this winter.

You may use this letter in any way you think fit, and again thanking you.

I am, yours faithfully,  
(Signed) WALLIE R. ROBINSON.

### HENS "GOING STRONG" EVER SINCE.

"Warreen," 15 Gordon Street,  
Brighton Beach,  
Forresville, S.A.,  
15th August, 1923.

Dear Sirs,—

It gives me much pleasure in relating to you the wonderful results I obtained in using Karswood Poultry Spice. My friend, Mr. Robinson, advised me to try it six weeks ago, he having used it with splendid results, so I sent straight away for a packet, and in the first week I could see the difference in my hens. I might tell you they were hanging in the moult, and after a fortnight of Karswood they had completed the moult and had actually started laying, and thanks to the Spice they have been going strong ever since. I have been telling my friends about Karswood Poultry Spice and its results, but one or two doubted my word so I brought them down and showed them my Rhode Island Red pullets and the eggs I was getting and I can tell you they altered their tune, they have some the same age as mine and they are not laying yet, so they now intend to give Karswood a trial. I thank you for your letter and I will be very pleased to receive the book when it arrives.

You may make use of this letter with pleasure.

(Signed) H. J. BRADLEY.  
7th April, 1922.

### "ALL IT CLAIMS TO BE."

Dear Sirs,—

I have been using "Karswood" Poultry Spice for some time now, with excellent results. It is without doubt one of the best Poultry Spices on the market. I have also used the "Karswood" Chicken Powder with very effective results as regards chicken ailments, etc., and I must say that the results from the Spice and Powder are all that it claims to be.

Yours faithfully,  
(Signed) G. McDONNELL.

### "HUNDREDS OF EGGS."

28 Edward Street,  
North Sydney, 3rd May, 1923.  
Gentlemen,—

I should like to say that I have used your Poultry Spice for two years—ever since I started to keep fowls. I have never had more than eight White Leghorn fowls, and have had hundreds of eggs from them. Your Spice was recommended to me by a friend who brings it to me from town as Mr. Meadows, who supplies me with pollard and grain, does not keep it.

Wishing you every success.  
P. M. BAITLE.

### NOTE THE ECONOMY.

1/- packet supplies 20 hens 16 days,  
2/- packet supplies 20 hens 32 days,  
13/- tin (7lb.) supplies 140 hens 32 days. 14lb. tins, 25/-; 28lb. tins, 48/-.

### "MAKES 12 HENS LAY FOR A HALFPENNY A DAY."

### MAKE THIS TEST:

Get a 1/- packet of Karswood Poultry Spice from your local Storekeeper, Grocer or Produce Dealer. Try it for a fortnight on half a dozen hens. Do not expect immediate results. Karswood works NATURALLY—it does not force. It takes a fortnight or three weeks to show results—but they are good and sure.

### AGENTS FOR AUSTRALIA.

New South Wales: The Coastal Farmers' Co-op. Society Ltd., Quay and Valentine Streets, Sydney.

Victoria & Tasmania: Messrs. Henry Berry & Co. Pty. Ltd., Collins Street, Melbourne.

South Australia: Messrs. S. C. Eyles & Co., Currie Street, Adelaide.

West Australia: Westralian Farmers Ltd., Wellington Street, Perth.

Queensland: The Farmers' Co-op. Dis. Co. Ltd., Turbot Street, Brisbane.

Italian queen bees seldom leave the comb, but black queens frequently do so, and attempt to hide in a corner under a cluster of bees.

A little smoke will cause the cluster of bees to separate, so that the queen may be seen. If this does not reveal the queen, she must have been on the combs, which were removed, and these should be carefully inspected again.

As each comb is being examined, shake or brush the bees back into a new hive on other combs. Then place the combs singly in the old hive until only one comb with unsealed larvae is left in this new hive.

Next, fill out the new hive with frames containing only starters or foundation comb. Then cover the hive and remove it some distance away. In a few minutes many of the old bees will return from the removed hive and care for the brood. Within 24 hours practically all flying bees will be back in the old hive.

Under these conditions the queen usually will be found on the single comb of brood. After she is removed, this brood and the bees should be returned to the original hive.

The first search for the queen should be made in the morning or at noon on a warm day, so that there will be enough bees left to care for the old hive of brood. When the colony is queenless, the new queen should be introduced.

### EXTON LATE RASPBERRY.

The new Raspberry, Exton Late, has again been viewed by the Victorian Sub-Committee of the Pomological Committee of Australia, and the most favourable pronouncement has been given to this new seedling.

It can hardly be called new in one sense, for Mr. C. Exton, of Kinglake, Victoria, has had it growing for a dozen years. But it is only recently, after much trial, that he has given publicity to it.

The plants rarely sucker, the fruit is carried on quite a number of laterals, and the season of ripening is just following that of the Fillbasket. These are all desirable attributes; and added to those is the fact that the well flavoured berries are of good commercial size.

The Victorian Sub-Committee has decided to ask the Australian Pomological Committee to give to the raiser a certificate of approval.

Mr. Exton has quite a large area fruiting this year, and a good patch of young plants. He was visited this year by a number of berry growers from the Dandenong Ranges, who were greatly impressed with the new fruit, several of them ordering a supply of plants for testing in their own district.

"Aren't those Goosberries rather dirty?" asked the purchaser of a street hawker.

"Dirty," snorted the barrowman, "think a bloke can wash 'em and part their hair in the middle for thrupence a pound?"

**THE BEST FRUIT**

Can Only be Obtained from Healthy, Thrifty Trees.

TREES FROM THE

**BALHANNAH DECIDUOUS NURSERIES**

Postal Address . . . BALHANNAH, SOUTH AUSTRALIA

Are bearing heavy crops of first quality fruit in leading fruitgrowing centres throughout the Commonwealth.

QUALITY IS MORE THAN A SLOGAN WITH US—IT IS THE KEYSTONE OF OUR BUSINESS.

Inquiries Solicited. H. N. WICKS, Proprietor.

Don't WONDER what your crop will be!  
MAKE SURE by using —

## “HARBAS”

THE SELF EMULSIFYING RED OIL.

Many Oils LOOK like  
— “HARBAS” —  
But DON'T ACT like it

Use “HARBAS” for  
Red Spider and all Scale and Aphid Pests

Use also

## “Harola” Lime Sulphur

The Best Fungicide on the Market.

### RETAIL SELLING AGENTS FOR VICTORIA:

Geo. Bailey, Narre Warren.  
Lawford's Fruit Exchange, Duncaster.  
Law, Sonner Pty. Ltd., Block Place, Melbourne.  
F. R. Mellor, 440 Elizabeth St., Melbourne.  
Nyah Fruitgrowers' Co-op. Ltd., Nyah West.  
Railway Packing Co. Pty. Ltd., Irymple.  
Tresco Fruitgrowers' Co-operative Assoc. Ltd., Tresco.  
S. J. Bevan, Avoca.  
S. S. Gault, Somerville.  
Tyabb & District Cool Stores, Tyabb.  
Upper Beaconsfield Orchardists Pty. Ltd., Up. Beaconsfield.

Wholesale Representative for Victoria—  
ESMOND RUSSELL, 60 Queen Street, Melbourne.



## FOR SALE

### “Illamerta,” Mylor, S.A.

5000 Export Apple Trees, River Frontage,  
Good Outbuildings, All Plant, Potato  
and Onion Growing, River Flats,  
18 miles from Adelaide. Can subdivide  
if necessary.

This year's crop given in.

Full particulars from :

**A. B. HARVEY & C. B. JENNINGS**  
**45-49 Steamship Buildings,**  
**Currie St., Adelaide S.A.**

## Successful Vegetable Culture.

Every Orchardist Should Grow Vegetables.

Interesting hints relating to the culture of vegetables were recently given before a meeting of the Wepowie branch of the South Australian Bureau of Agriculture by the Hon. Sec., Mr. W. J. F. Smith. The rainfall in that district is 13 inches to 14 inches annually. Mr. Smith stated that the plot selected for the farm garden should contain about half an acre of good land, and be securely enclosed with a netting fence.

It should be sheltered from the wind, and ploughed to a depth of about 10 inches if the soil was not "clayey," but if there was a clay subsoil it was a good plan to cart loamy soil and old stable manure on to the plot and dig it into the soil. The land could then be cultivated again after the first rain, and worked down to a fine tilth.

Before planting, another good dressing of stable manure should be applied, and dug into the soil.

Almost all varieties of vegetables would grow if given a little attention and plenty of water.

Turnips, Carrots, Parsnips, and Beetroot should be planted in May, in rows about 1 foot apart, so that they could easily be thinned out.

Lettuce, Cabbage, and Cauliflower seed should be sown in a well-manured bed or box.

Potatoes should be planted about June, in rows 2 feet apart, with 8 inches or 9 inches between each set. After the plants had been up about two or three weeks they should be well "earthing up."

Onions should be planted about June in rows 2 feet apart, with 4 inches or 5 inches between each plant. He recommended Silver Skin and Brown Spanish as suitable varieties for that district.

Peas should be planted in rows about 18 inches apart, William Hurst being an excellent variety.

Tomatoes required a fine and well-manured seed bed. They should be sown in July or August. Once the plants came through the soil they should be left uncovered, in order to make hardy growth. When the plants were ready for transplanting they should be placed in rows about 2½ feet apart, with 2 feet between the plants.

For Melons, Trombones, Cucumbers, etc., a hole about 2 feet deep and 3 feet in diameter should be made, and then filled with a mixture of stable manure and good soil. A bed of that size would hold about 12 seeds, and when they were ready to transplant, all the plants with the exception of three or four should be removed. These plants, especially Cucumbers, required heavy waterings.

## CROP CULTIVATION.

In the growing of crops, three factors are outstanding—(1) fallowing, (2) crop rotation, (3) the seed.

Fallowing conserves moisture, destroys weeds, and gets rid of many disease spores. Cultivate the fallow when rain has compacted the surface.

Sheep are a valuable adjunct to fallowing: they serve to compact the soil, keep down weeds, and save the expense of cultivating too frequently.

The importance of clean seed cannot be over-estimated. If growing wheat, do not obtain seed from doubtful sources, and it must be pickled before sowing.

## PLANT BULBS NOW.

For a glorious show of bloom in the winter and spring, plant Bulbs now. You can select between Daffodils, Jonquils, Freesias, Hyacinths, Ranunculus, Anemone, Snowdrop, Sparaxis, and many others.

Work the ground to a depth of three feet, bury rotted manure: plant the bulbs to a depth of twice their diameter, i.e., a bulb with the diameter of one inch should be covered by a depth of two inches of fine soil.

Bulbs make the garden gay. Plant now, add brightness to the garden and home, and please the women folk.

## .. THE .. Farmers and Settlers' Co-operative Insurance Company of Australia Ltd.

<b>Capital,</b> <b>£100,000.</b>	<b>Subscribed Capital,</b> <b>£70,000.</b>	<b>Paid Up,</b> <b>£35,000.</b>
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### THIS IS THE ORCHARDISTS' CO.

for insuring his buildings, fruit in store, Workers' Compensation, and other risks. An orchardist who becomes a shareholder and places his insurances with this Company participates in the profits which his own business creates. Thousands of farmers and orchardists are already shareholders. Write for particulars.

#### Victorian Branch:

Directors—Mr. SYDNEY SAMPSON, M.H.R., Mr. DUNCAN MCLENNAN, Mr. P. H. H. IBBOTT.

Manager—H. L. CARROLL

Address: 360 Collins Street, Melbourne

YOU are invited to become a shareholder.

AGENT—LAWFORD'S FRUIT EXCHANGE PTY. LTD., 60 Queen Street, Melbourne, and Williamson's Road, Doncaster.

AGENTS WANTED.

ESTABLISHED 1866.

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## Walters' Seeds

For the CHOICEST VEGETABLES and most BEAUTIFUL FLOWERS sow our Seeds

We are Headquarters for—

## Hunter River Lucerne

Cleaned by our Special Machinery, and free from all weeds. SPECIAL QUOTATIONS for Cwt. or Ton lots on application.

We have large stocks of the following in best re-cleaned Seed: Broadleaf Dwarf Essex Rape, Grasses, Clovers, and all varieties of Green Fodder and Root Crop Seeds

Write at once for our Special Quotations.

## Spraying Oils, Fungicides, Raffia

Illustrated Catalogue and Calendar, post free.

**WATTERS & SONS**  
251 & 253 Swanston St., Melbourne

**PINEAPPLES RESPOND TO  
MANURIAL TREATMENT.**

**Experiments in Queensland.**

For some years past it has been found that Pineapple growing is a very profitable commercial undertaking in many parts of Queensland.

As this crop is a fairly gross feeder, it is necessary, in order to obtain maximum results, to see that the necessary plant-foods are present in the soil in sufficient quantities in a readily available form, so that plant and fruit growth is not restricted.

As the fruit is continually maturing, it is advisable to spread the application of the manure and from tests made it has been found that the best time to do this is during March and November of each year.

A report received recently from Mr. George E. Brown, "Craiglands,"

Montville, Qld., gives the following particulars of a trial which he carried out on this crop. This information should be of great interest to many growers, as the data coming from "Craiglands" can be relied on.

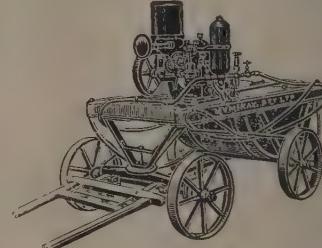
The test was made over three plots treated in the manner as shown below:

By comparing these results it will be seen that Plot No. 1, which received a general mixture of manures, gave an increase over the unmanured plot of 210 dozen Pines per acre, value £47/5/- while Plot, No. 3, which received in addition to the general fertilisers applied to Plot No. 1, a top-dressing of Nitrate of Soda at the rate of 5 cwt. per acre, gave an increase over the unmanured plot of 290 dozen Pines per acre, value £65/5/-.

Mr. Brown states that in arriving at the value of the crop the cash returns were averaged and taken at 4/6 per dozen. This he considers was hardly fair, as the manured areas carried the heavier Pines, and thus realised better prices.

It is interesting to note that by applying an extra dressing of Nitrate of Soda to this crop, highly profitable returns can be obtained.

**The Friend of the Fruit.**



**The Sunshine PowerSpray**

Two-Cylinder High-Pressure Pump,  
Supplied with 1½, 2½, or 7 h.p. engine.  
Durable and most effective.

Easy Extended Terms.  
Full particulars posted promptly  
on request.

**H.V. McKAY Pty. Ltd.**

Sunshine Harvester Works, SUNSHINE.  
Showrooms, 607 Collins St. W., Melbourne

Manures.	Yield.	Dozen p.a.	Value.
Plot No. 1.			
Holbourne Island Guano, 6cwt. p.a. . . . .	—	—	—
Superphosphate, 4cwt. p.a. . . . .	—	—	—
Muriate of Potash, 3cwt. p.a. . . . .	850	..	£191 5 0
Plot No. 2.			
No Manure,—Check Plot . . . . .	640	..	£144 0 0
Plot No. 3.			
Holbourne Island Guano, 6cwt. p.a. . . . .	—	—	—
Superphosphate, 4cwt. p.a. . . . .	—	—	—
Muriate of Potash, 3cwt. p.a. . . . .	—	—	—
Nitrate of Soda, 5cwt. p.a. . . . .	930	..	£209 5 0

Half the above-mentioned manures were applied in October, 1922, and the balance in March, 1923.

## HOW CLOSE CAN YOU AIM AND GET HIM?

TIME and again sportsmen have declared that they can "aim closer because the Black Shells are quicker." The illustration indicates the value of a quick, fast shell rather than judgment or "hunch" in "leading" the game. What makes the Black Shells quicker? The primer and wide flash passage, causing instantaneous ignition.

You can test the primer in the house. Empty the load from a Black Shell lay a coin on the gun muzzle, and see if it hit the ceiling when you pull the trigger. Make the same test with any other shell. Then get your regular load in the Black Shells, and try aiming with less "lead" in the field or at the traps.

## U.S. The BLACK SHELLS

Loaded with Dupont Powder

### Gollin & Co. Pty. Ltd.

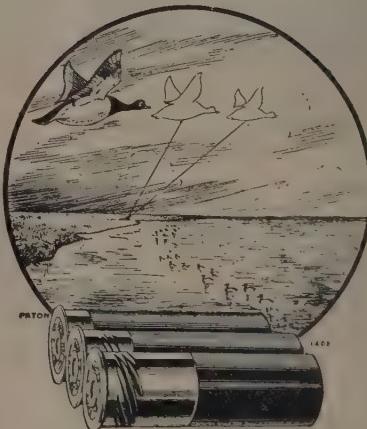
Melbourne

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Sole Australian Agents for United States Cartridge Co.



#### WHOLESALE DISTRIBUTORS:

VICTORIA : JOHN MUES, Post Office Place, Melbourne.	NEW SOUTH WALES : JOHN KEEP & SONS, Sydney.	SOUTH AUSTRALIA : GOLLIN & CO. Pty. Ltd., Adelaide.
QUEENSLAND : T. McWILLIAM & CO., Brisbane.	SOUTH TASMANIA : JOHN WHITE, Hobart.	NORTH TASMANIA : J. R. GREEN Pty. Ltd., Launceston.

## Passion Fruit Culture.

### Methods of Dealing with Plant Diseases.

An enquiry is to hand from F.T.L., of Arncliffe, N.S.W., who states: "I am a subscriber to your valuable "Fruit World," and would like information re treatment for "Black Spot" and "Bullet" which affect Passion vines."

On this subject, Mr. W. J. Allen, Fruit Expert, N.S.W. Department of Agriculture, gives information as follows:

#### Fusarium Sp. or Foot Rot, and Sclerotinia Sp. of Passion-fruit.

These two diseases are grouped together, as the symptoms and treatment required are very similar in each case.

**Symptoms.**—Both maladies are due to the presence of the parasitic fungi. First indications are usually a yellowing and wilting of the leaves. If the vine is examined one will frequently find a white or greyish mould growing on the surface of the stem near the ground level. This is usually more evident in the case of Sclerotinia than in the more common foot rot.

In the latter case there is often a swelling of the stem in the diseased area, and there is a tendency on the part of the woody strands of the stem to become separated and exposed. The small, hard, dark-coloured bodies which are found in the pith of shoots killed by Sclerotinia serve to propagate the disease.

In both cases infection usually follows some injury to the plant by implements used in cultivation, the fungus or its spores gaining access to the wound from the soil.

Heavy, badly-drained soils predispose a plant to either disease.

**Controls.**—Remove and burn diseased plants. Apply lime to the soil from which diseased plants have been taken.

In cultivation avoid injuring the plants. Where necessary pay attention to the improvement of the general soil conditions by liming and drainage.

#### "Bullet" or Woodiness of Passion-Fruit.

This is an abnormal condition of growth, mainly manifested in the Passion-fruit itself.

**Symptoms.**—It is commonly observed on fruits after they are about half-grown, and most frequently on old vines; but the condition occurs on young vines and in the fruit at all stages of growth.

Instead of the production of rind or skin of normal texture, certain portions become thickened and hardened. This is sometimes accompanied by a certain amount of cracking and scaldiness of the outer layers. In such fruits there is a notable reduction in the amount of seed, very few, if any, mature seeds being produced in the region of the bullet or woody tissue.

On vines bearing much fruit in this condition, the leaves are frequently smaller than normal leaves, and are usually more tough and wrinkled.

No parasitic organism has been associated with the disease, but it appears that the condition may be

brought about by a number of physical or physiological factors.

The following are some of the main features of its occurrence:—

1. There is a certain amount of apparent varietal resistance among vines. Some plants may not develop Bullet for several years, while others under the same conditions become woody in the first season.

2. The age of the vine is important, the condition being most commonly developed in vines 3 to 4 years old. Older vines are practically worthless, as far as the production of saleable fruit is concerned.

3. Vines grown (a) on poor soils; (b) on soils which are subject to dry spells, (c) in localities which are liable to frosts at time of flowering, usually develop the condition very quickly.

With the present methods of culture, a large proportion of Bullet is generally associated with the winter crop.

ESTABLISHED 1819.

## JAMES ADAM, SON & CO. Fruit Auctioneers and Brokers

1 TEMPLE COURT  
LIVERPOOL ENGLAND

Consignees' Brand 361

Pioneer Brokers of Tasmanian Apples in Liverpool.  
Special Catalogues showing prices issued after each sale.

Victorian Representative  
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## FRUIT WRAPPING PAPER

DIRECT FROM THE MILLS TO THE GROWERS.  
SUPPLIES OF ALL SIZES NOW AVAILABLE.

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Phone: 11504

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16 Chesser Street.

Phone: 825

**Controls.**—There are no control measures which are completely satisfactory, but the adoption of the following suggestions will keep the percentage of woody fruit at a minimum:

1. Plant only vines raised from fruits which have been grown on vines free from Bullet.
2. Add fertilisers to the soil where necessary. A complete manure is often advisable, i.e., one which contains phosphates, nitrates and potash.
3. Add humus (vegetable matter, stable manure, etc.) to improve soil texture and water-holding capacity; stir surface soil to form a soil mulch which will conserve moisture during dry spells.
4. Avoid pruning at a time which will promote blossoming during periods of frost.

#### Brown Spot of Passion-Fruit.

**Symptoms.**—This disease is due to the presence of a fungus parasite (*Gloeosporium fructigenum*) which attacks the leaves, stem, shoots, and fruit. The disease may become serious during a spell of rainy weather, or when heavy night dews are followed by warm days.

The symptoms are first evident on the leaves and shoots. On the leaves small circular brown spots appear; these gradually enlarge and may be-

come gradually enlarge and may become more or less irregular in outline. A dark green border, which later turns dark brown, develops round the spots, and this band surrounds a central area of light brown, dead tissue, while in the centre of the area there is usually a small white or greyish spot. In the older stages this dead tissue may be greatly cracked.

On the stem, the disease appears in the form of more or less elongated discoloured spots, which as the disease progresses may open up and form cankers in which the underlying woody tissue is exposed.

In some cases the canes are completely girdled, resulting in the death of the parts above the girdle.

Shoots when affected wither and die back.

The condition first appears on the fruits in small somewhat sunken brown spots with concentric markings. As the disease progresses the skin becomes parchment-like, and the fruits shrivel and drop.

**Control.**—Experiments have been carried out with Bordeaux mixture, lime-sulphur, and Burgundy mixture. Up to the present, spraying experiments have failed to indicate a method of controlling the disease.

\* \* \*

If further information is desired, or if wishing to have specimens identified, F. T. L. would do well to communicate with the Government Biologist, Sydney.

## ORCHARD FOR SALE

**70 ACRES FREEHOLD LAND,**  
16 miles from Stawell. 20 acres good young orchard, full bearing. Up-to-date home, 6 rooms, with gas light. Water laid on from spring. Also 230 acres of lease country given in.

**Price, £3000**

Deposit of £500, balance on easy terms

For further particulars apply—

**D. WILLIAMS**  
AUCTIONEER, STAWEELL, VIC.

## ORCHARDISTS!

We are Citrus Tree Experts. Write us for all information on Citrus Trees. Intending planters should plant our trees. They are strong, healthy and well grown.

**NOTE THE PRICE — £5 per 100**

**F.O.R. Ryde or F.O.B. Sydney**

## SWANE BROS.

Enterprise Nursery

ERMINGTON

New South Wales

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**MARCH 14 and 15, 1924**

THE LEADING AUTUMN SHOW OF THE STATE

## FRUIT, FLOWERS POULTRY, Etc.

HELD

in Spacious Halls and  
marquees right opposite  
Ringwood Railway  
Station.

Night Watchman provided.

Carrier in attendance.

Government Certificates,  
Blue Ribbons,  
Specials and Grand  
Specials.

Schedules on application to  
the Secretary—

**G. W. MULLER**  
Ringwood.

# The Time is Opportune

to Ship Your Fruit to

## MANCHESTER

The Port in the Centre of

The Most Densely Populated Area in the United Kingdom.

### THE IMPERIAL FRUIT SHOW HELD IN MANCHESTER

from the 26th October to the 3rd November, 1923 was attended by visitors from all parts of the World; over 5,000 exhibits of British and Imported Fruit were shown, and an increased demand for choice fruit will follow throughout the area which Manchester serves.

Over 2,300,000 packages of Overseas Fruit were purchased in the Manchester Fruit Auction Rooms during the year ended 30th June, 1923, by Fruit Merchants trading all over the Midland and Northern Counties of England; these purchases were distributed direct to buyers' orders from the Manchester Docks.

In explanation of largely increased trade with Manchester, the General Manager of the United Fruit Companies of Nova Scotia Ltd., stated in his recent Annual Report:—

"This Market was the most consistent throughout the entire Season. Apples were handled much more rapidly and less adjustments were necessary—brought about by the fact that the facilities at Manchester are so much better than at any other English Port."

"They certainly have a very wonderful organisation, and we believe this is one reason why Manchester is becoming recognised as one of the best distributing Ports in England."

"Liverpool, from the standpoint of marketing our fruit, ranks second, while Glasgow is spasmodic, and in London practically until the close of the Season, much lower prices ruled than on any of the other Markets."

The following Fruit carrying steamers are listed to load in Hobart and other Australian Ports for MANCHESTER during the 1924 Season:—

* "AYRSHIRE" . . . . .	end February	"SURREY" . . . . .	early April
STEAMER . . . . .	mid March	* "BERWICKSHIRE" . . . . .	mid April
* "ARGYLLSHIRE" . . . . .	end March		

Note:—The steamers marked \* are listed to make Manchester their first port of discharge after leaving the Australian coast

Big demands for space are anticipated, and early application to the Steamship Agents is advisable. If any difficulty is experienced in obtaining your requirements, write or wire to the undersigned who will render every possible assistance, and willingly furnish particulars of Port and Forwarding Charges, names of Manchester Selling Brokers, etc.

## W. J. WADE

Australasian Representative of the Port of Manchester

8 Bridge Street, Sydney, N.S.W.

When the apple fell on Sir Isaac Newton  
he hollered out—"Three Cheers,  
I've discovered Gravity!"



Order "CARLTON" Now and make sure.  
You cannot afford to let the grub spoil your fruit.  
**IT'S YOUR LIVING!**

If he had sprayed with  
**"CARLTON"**  
Arsenate of Lead

he would have discovered how to kill the grub, and make  
the apple stop on the tree.

One pound of "CARLTON" kills more grubs than a pound  
of any other paste, because it's the highest quality on the  
market, as shown by Government tests. It's 20% to 33%  
stronger than others.

F. R. MELLOR, 440 Elizabeth St., Melbourne

— F. CHILTON —

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FRUIT COMMISSION AGENT

Highest Market Prices

Prompt Returns

Reliable Advice

Registered Address for Telegrams and Cables,  
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References:—Bank of N.S.W., Haymarket, Sydney  
and Growers throughout Australia

CITY FRUIT MARKETS, SYDNEY

WOOD-WOOL

FIRST QUALITY AND AUSTRALIAN  
Less than half the cost of Imported.

A Leading Firm of London Importers report on a large shipment of pears packed  
in trays with our WOOD-WOOL. This consignment certainly travelled well, and  
arrived in very good condition, the wood-wool used in packing appearing quite suitable.

Write for quotations

LAWFORD'S FRUIT EXCHANGE PTY. LTD., DONCASTER, VIC.  
(Sole distributors)

# Fruitgrowers, Exporters

Throughout Australia and New Zealand

— Send your —

## APPLES, PEARS, ORANGES

— to —

# T. S. JOHNSON & CO.

### Fruit Salesmen

ESTABLISHED IN

## Liverpool, Manchester, Leeds, Hull

A population of 40 million people, all large fruit eaters,  
is reached through these centres.

Some Good Reasons why Australian Fruit should be sent to  
**LIVERPOOL MANCHESTER AND HULL**

- (1) These ports serve the large populations in the North and Midlands of England, also Scotland, Ireland, and Continental Markets.
- (2) Some of the largest coal fields are situated in these centres, the hardworking population are big fruiteaters.
- (3) Quick unloading and despatch of fruit is provided.
- (4) Cold storage facilities are available.
- (5) Direct shipments to Liverpool, Manchester and Hull save extra handling charges as is the case when fruit is transhipped from London.
- (6) Shipments should be made to T. S. Johnson & Co., because they give you the choice of the three ports and their efficient selling Organisations which are established therein.
- (7) T. S. Johnson & Co.'s regular circle of buyers and wide distributing channels enables them to secure highest prices.
- (8) The way to develop new markets is to concentrate on those British outports which are earnestly striving to increase their trade in fruit with Australia.

WRITE FOR ADDITIONAL INFORMATION.

#### Agents :

VICTORIA.—Messrs. INTERNATIONAL FRUIT & MERCANTILE CO., 410-414 Flinders Lane, Melb.

TASMANIA.—Messrs. E. R. COTTIER & CO., 82 Collins Street, Hobart.

SOUTH AUSTRALIA.—Messrs. BROCK & BATCHELOR LTD., Port Adelaide.

WESTERN AUSTRALIA.—GEO. EVANS & CO., 46 Mouatt Street, Fremantle.

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Is Machine Dressed to a Purity of almost 100 per cent.



**GOOD SEED IS AS GREAT A NECESSITY WITH LUCERNE AS WITH ALL OTHERS.** The farmer knows the damage and injury done by dodder, but there are many weeds to be found in inferior quality Lucerne Seed almost as dangerous. Our "STANDARD" Quality Hunter River Lucerne has an average growth of 98 Per Cent. A high germination is assured.

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## GROW LUCERNE ON EVERY FARM

### BECAUSE—

1. It is a profitable crop.
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  - (a) In yield per acre.
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4. The frequent cutting destroys weeds.
5. It balances the corn ration.
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A wonderful improver and enricher of poor land, situated near the sea. The plant is valuable for fattening sheep and cattle.

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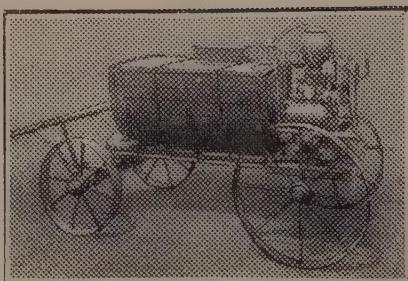
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Our Latest Model Water Cooled Engine is the most compact, efficient, and cheapest outfit ever offered. Material of the best. Expert workmanship. Working demonstration may be had at Factory before delivery. Initial cost is last cost. Come right here and save money. Catalogs on application.

£100/-

No. 5 Kangaroo Spray Pump on Vat, £10/10/-; on Cask £8/-.  
No. 4 Kangaroo Double Delivery on Cask, £7/7/6; Single, £6/7/6. Brown's Auto Spray No. 5, 30/-

**Arsenate of Lead** "Vallo" Brand. Best Australian production. Satisfaction to all users.

**Swift's** The highest grade in the world. Tons sold, and no complaints. Absolute reliability proved.

PLEASE SEND FOR QUOTATIONS

**Planet Junior** Labor Saving Implements. Send for particulars and prices.

**Orchard Ploughs** Prices low, and variety to choose from.

Cultivators, Harrows, and all kinds of Implements and Garden Tools kept in stock.

**Incubators** The Famous TAMLIN. Most reliable Incubator on the market. Holds world's record for hatching. Brooders, Fowl Rings, all Poultry Requirements

**D. & W. CHANDLER LIMITED,**

... IRONMONGERS ...  
276 to 294 Brunswick St.,

**Fitzroy**  
Victoria

## "Higher than a Kite"

### The Ellis Fruit Grader

Here's a copy of a letter just to hand:—

Shepparton E.

"I may tell you I would not be without it now,  
it knocks hand grading higher than a kite."

(Signed) A. D. CRAIG,

18/2/24.

Shepparton.

Does not this speak volumes?

Instal one now—You can't do without it, either.

We are distributors of the British  
Wonder Car "The Arrol Johnston."

Write for particulars.

### Ellis Grader & Motor Co.

226 FLINDERS LANE, MELBOURNE.

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Qld Fruitgrowers' Assn., Roma St., Brisbane. N.S.W.  
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Sth. Aus.—Premier Machinery Co., Morphett St., Ade-  
laide. New Zealand—A. Simmonds Ltd., Heretaunga  
St., Hastings. South Africa—Oswald Bros., Cape Town.

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CONSIGN YOUR FRUIT TO

The North of England Fruit Brokers Ltd.

## MANCHESTER

We sell and distribute among 10,000,000 con-  
sumers within a radius of 50 miles of the Man-  
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For particulars regarding advances steamship  
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**N. V. WADE,**

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THE NORTH OF ENGLAND  
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FAST PASSENGER AND CARGO SERVICE TO LONDON

Via Adelaide, Fremantle, Colombo, Port Said and Plymouth, transhipping  
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" LARGS BAY	13,850	22nd Apr.	29th Apr.	7th May	10th May	15th May
" HOBSONS BAY	13,850	17th May	24th May	28th "	31st "	5th June
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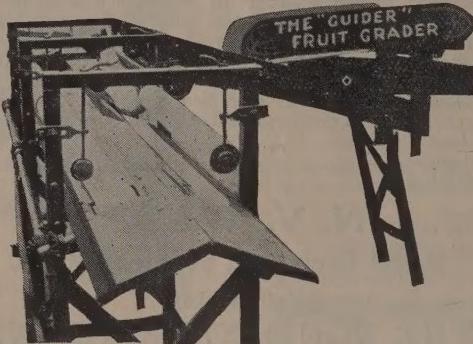
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# The GUIDER FRUIT GRADER

The latest labor-saving device on the Orchard

A well designed and faithfully constructed outfit which has won golden opinions from practical growers of all kinds of fruit.



The Guider Fruit Grader, "The Feeding Grader Unit." The Guider, when shipped, is 20 inches wide and 7 ft. long. Conveyor Feeder, 10 inches x 3 feet.

**YOU NEED A GRADER!**

**The Guider** is best. It guides the fruit into correct compartments.  
No handling; no bruising.

**OUTSTANDING FEATURES:**

Quick : Accurate : Durable : Cheap : Portable.

No bruising of the fruit.

No drop anywhere.

Works with hand or power.

**THE LATEST AND BEST IN  
FRUIT GRADING MACHINES.**

**GRADES  
ALL KINDS OF  
FRUIT**

**PUT TO THE TEST  
THE "GUIDER IS BEST**

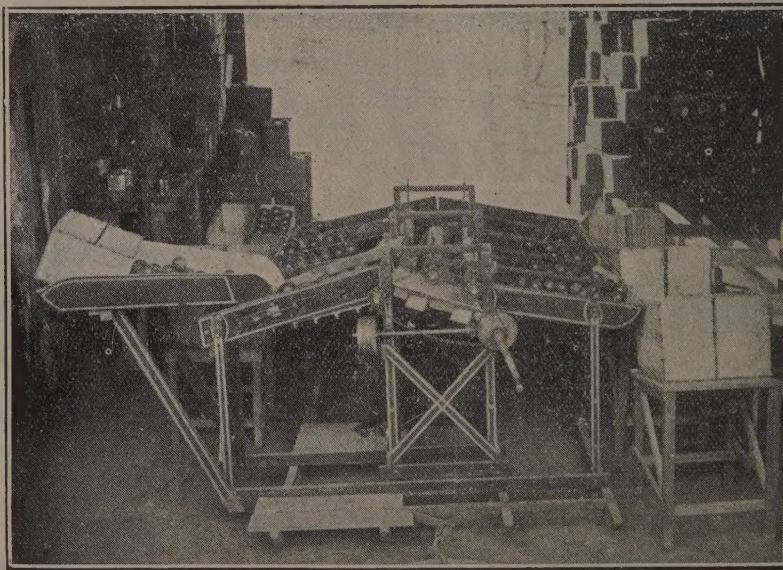
Built to suit  
**LARGE PACKING**

**HOUSES**

and  
for use on small  
Orchards.

Accommodation is provided  
for any number of packers.  
Graded fruit conveyed to  
packers. No handling.

**YOU IMPROVE YOUR  
ORCHARD EQUIPMENT  
BY INSTALLING A GUIDER  
FRUIT GRADER.**



The "Guider" Fruit Grader in Operation.

**THE GUIDER FRUIT GRADER COMBINES PRACTICAL FRUITGROWING EXPERIENCE WITH  
ENGINEERING SKILL.**

**J. L. HOLLAND,** *Patentee and  
Builder* **Shepparton, Vic.**

WRITE FOR PARTICULARS.

# The Fruit Trade

## Every Firm should be Officially Represented

if only by a line or two—Our Readers are Your Clients. It is an able and wise introduction, and when you go through the fruit districts our Readers will have already known you through us. It pays best to send Consignments Regularly—Not Occasionally—to the best markets, by doing so you strike the rising and falling markets and make a fair average for the season.

A ten times wider and better distribution will ensure a ten times greater production, at more payable returns. It is large and valuable exports from settled industries that make a nation prosperous.—Ed. "F.W."

This Journal is the recognised representative of the FRUIT TRADE in the Southern Hemisphere.

### REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, EXPORTERS.

Advertising in this Journal.

### NEW SOUTH WALES.

#### Sydney.

Chilton, F., City Fruit Markets.  
Hopkins & Lipscombe, Fruit Exchange.  
Rogers, F. H. G., Fruit Exchange.  
Rule & Beavis, Fruit Exchange.  
Wade, Noel, V., Royal Exchange (representing the North of England Fruit Brokers Ltd., Manchester, Eng.).

### VICTORIA.

#### Melbourne.

Coastal Farmers' Co-op. Society, Western Market.  
Davis, J., Western Market.  
Lister, G., Western Market.  
Mills & Co., J. B., 9 Queen Street (representing Nethard, Lowe & Wills Ltd., London).  
Mills, A., & Sons, Western Markets.  
McClure, Valentine & Co. Pty. Ltd., 49 William St.  
Mumford, J. G., 449 Flinders Lane.  
Pang & Co. Ltd., H. L., Little Bourke St.  
Silbert, Sharp & Davies, Western Markets.  
Stott & Son, T., Western Markets.  
Tim Young & Co., Western Market.  
Vear, F. W., 49 William Street.  
Wade & Co. H. M., 439 Flinders Lane.  
Woolf, G., Western Market.

### QUEENSLAND.

#### Brisbane.

Barr, A. S., Fruit Exchange.  
Collard & Mackay, Fruit Exchange.  
Cooksey & Co., Fruit Exchange.  
Finlayson & Son, Fruit Exchange.  
Geeves, H. V., Fruit Exchange.  
International Fruit and Produce Co., Fruit Exchange.  
Robsons Ltd., Fruit Exchange.  
W. J. Whitten & Co., Fruit Exchange.

### WESTERN AUSTRALIA.

#### Perth.

Wills & Co. Ltd., G., Exporters.

### SOUTH AUSTRALIA.

#### Adelaide.

Wills & Co. Ltd., G., Exporters.

### TASMANIA.

#### Hobart.

Jones & Co. Ltd., H., Fruit Exporters.  
Peacock & Co., W. D., Fruit Exporters, and at London.

### NEW ZEALAND.

#### Auckland.

Radley & Co. Ltd., Fruit Auctioneers.  
Turner & Growers Ltd., City Markets.

#### Dunedin.

Co-operative Fruitgrowers' of Otago Ltd.  
Paterson, Thos., & Co., Vogel Street.

### ENGLAND.

#### London.

Bradnum, Jas., Covent Garden.  
Da Costa, Gerald, Covent Garden.

Jacobs, E. & Sons, Covent Garden.  
Lewis, Edw. H., & Son, Ltd., Covent Garden.

Lewis, Edward H. Son Ltd., Covent Garden.  
Margeson & Co. Ltd., Covent Garden.  
Moore & Co. Ltd., F.W., 8 Arthur Street, London Bridge.

Monro, Geo., Ltd., Covent Garden.  
Nethard, Lowe & Wills Ltd., Tooley Street.  
Poupart, T. J., Covent Garden.  
Ridley, Houlding & Co., Covent Garden.  
Swann & Co., 3 Salter's Hall Court.

Hull.  
Bechervaise, E.  
White & Son Ltd.

Liverpool.  
J. Adam, Son & Co.  
Johnson, T. S., & Co.  
Roger White & Co., 37 Victoria Street.  
Liverpool Fruit Brokers Assocn. Ltd.

Manchester.  
North of England Fruit Brokers Ltd.  
Port of Manchester, Captain W. J. Wade.

### COMPARATIVE WEIGHTS AND MEASURES.

#### English Fruit Weights.

Apples, sieve is equal to 1 bushel, generally 38 lbs.

Cherries and Currants,  $\frac{1}{2}$  sieve equal to 24 lbs.

Gooseberries, Plums,  $\frac{1}{2}$  sieve, equal to 28 lbs.  
Pears, sieve, equal to 50 to 56 lbs.

#### Foreign Weights.

Apples, Canadian, barrel, equal to 140 lbs.  
Apples, American and Nova Scotian, barrel, equal to 120 to 130 lbs.

Pears, Californian case, equal to 40 lbs.

### British and Australasian Market Reports Great Britain.

#### London (7/1/24).

Messrs. T. J. Poupart Ltd. report, under date 7/1/24, as follows:—English Apples, 10/- to 14/-; American, 10/6 to 14/-; Nova Scotian, best, 23/- to 28/-; South Africa—Peaches, 5/- to 12/- per box; Apricots, 6/- to 8/-; Plums, 4/- to 10/-; Nectarines, 5/- to 10/-; Grapes, English, 2/6 to 4/- per lb.; Belgian, 1/9 to 2/9; choice Muscats, 6/- to 8/-; Oranges, 300's, Denia, 12/- to 18/-; Murcias and Valencia, 11/- to 14/-; Lemons, Murcia, 300's, 16/- to 20/-.

#### London (18/1/24).

Mr. Gerald DaCosta reports prices ruling as follows:—English Apples, 8/- to 12/-; Grapes, 1/6 to 3/6 per lb.; Oranges (Spanish), 300's, 10/- to 16/-; American Apples, 10/- to 15/-; Pears, W. Nelis, 20/- to 21/-.

#### Liverpool (7/1/24).

Messrs. T. J. Poupart Ltd. report:—American Apples, 10/6 to 13/-; South Africa—Plums, 7/- to 7/6;

Peaches, 6/6 to 8/-; Murcia Lemons, 240's, 16/-; Oranges, 360's, 10/6; Almeria Grapes, 22/6.

#### Liverpool (9/1/24).

Messrs. J. C. Houghton & Co. report prices as follows:—American Apples, 15/- to 35/- per barrel; 7/- to 13/6 per box; British Columbia, 9/9 to 15/9; Oranges, Valencia, 300's, 10/- to 11/- per  $\frac{1}{2}$  case; Murcia, 5/6 to 14/3; Lemons, 8/- to 14/9; Mandarins, 3/9 to 11/-.

### New South Wales.

#### Sydney (27/2/24).

Mr. F. Chilton, City Fruit Markets, Sydney, reports under date as follows:

Queensland Fruits.—Pines, smooth (colored), 12/- to 14/- per case; Tomatoes, 2/- to 5/- per  $\frac{1}{2}$  case. New South Wales Fruits.—Bananas, Tweed River, 18/- to 26/- per case; Oranges, 7/- to 18/- per bushel case; Lemons, 7/- to 11/-; Apples, eating, 4/- to 14/-; green cookers, 4/- to 10/-; Passions, 4/- to 12/- per  $\frac{1}{2}$  case; Peaches, 3/- to 7/-; Plums, 2/- to 7/-; Pears, W.B.C., 6/- to 7/6; Quinces, 4/- to 6/-. (N.B.—Prices for New South Wales fruit are quoted exclusive of case.) Grapes, Black Hamburg, 4/- to 6/- per  $\frac{1}{2}$  case; Black Muscat, 5/- to 10/-; White Muscat, 5/- to 10/-. Victorian Fruits.—Apples, 8/- to 12/- per bushel case; Pears, W.B.C., 6/- to 7/-; Peaches, 7/- to 10/-; Tasmanian Fruits.—Apples, A.L.F., 6/- to 7/- per bushel case; W.P.M., 8/- to 12/-; Pears, W.B.C., 3/- per  $\frac{1}{2}$  case.

The Sydney fruit markets have been very heavily supplied with fruit during the past few weeks, but the glut is now clearing off, and an improvement in price has already been made for Passions, Pines and Peaches. Pears and Grapes are still coming forward freely.

### Victoria.

#### Melbourne (27/2/24).

The following are the wholesale prices ruling at the Western Market:—Apples—Good to choice eating, 4/- to 8/-; good to choice cooking, 3/6 to 5/-. Bananas—Queensland, 18/- to 26/- double case. Grapes—Muscats, 10/- to 15/-; R. des Dames, 10/- to 16/-; B. Prince, 10/- to 16/-; Terrets, 10/- to 13/-. Lemons—Victorian, 10/- to 13/-; imported, 20/- to 21/-. Oranges—Imported, 25/- to 26/-. Peaches—Good to choice dessert, 7/- to 8/-; medium dessert, 4/- to 5/-; canning, 3/- to 5/-. Pears—W. Bc., 2/- to 4/-. Plums—Dark, light, 3/6 to 5/-. Pineapples—Queens, 10/- to 12/-.

### South Australia.

#### Adelaide (23/2/24).

Apples, eating, 4/- per case; cooking, 3/6; Bananas (Fiji), 30/- to 32/-. Figs, 9/-; Grapes, dark, 9/-; white, 8/- to 9/-. Lemons, green, 8/- to 10/-; ripe, 12/- to 14/-. Nectarines, 15/-. Peaches, 8/-; Pears, eating, green, 5/- to 6/-; ripe, 6/- to 7/-; cooking, 5/-; Pineapples, 14/-. Plums, 6/-; Damson, 10/- to 11/-; Japanese,

7/-; Prunes, 7/-; Strawberries, 8/- to 9/- per dozen lb.

### Tasmania.

Hobart (23/2/24).

Peaches, 3/- per tray, 3/9 per half-case; Plums, 1/6 to 2/9 per half-case; Apricots, 2/- to 3/- per half-case; Apples, 4/9 to 5/- per case; Raspberries, 4d. per lb.; Blackberries, 3d. per lb.; Walnuts, 11d. per lb.

### Queensland.

Brisbane (14/2/24).

Apples, eating, 7/- to 14/- a bushel case; cooking, 7/-; Lemons, Lisbon, 4/6 to 6/-; Passion fruit, 6/- to 10/6 a half-bushel case; Peaches, 2/- to 6/6; Plums, 2/6 to 6/-; Pineapples, smooth, 1/- to 3/6 a dozen; rough, 6d. to 2/9; Bananas, Cavendish, 1d. to 7d. a dozen; sugar, 2d. to 8d.; Grapes, black, 4d. to 5d. a lb.; white, 2d. to 4d.

### Western Australia.

Perth (21/2/24).

Apples, Jon., 10/- to 14/- per bushel case; small, to 7/-; Cleo, 1/2 case, 6/- to 7/-; small, to 4/6; cookers, to 6/6; Pears, Bartlett, 9/- to 14/- per bushel case; others, to 7/-; Peaches, 18/- to 22/-; medium, 13/- to 16/-; small, to 10/-; Nectarines, 17/- to 20/-; others, to 13/-; Plums, Pond's, to 18/-; Satsuma, to 15/-; Diamond, to 16/-; Kelsey, to 13/-; Prunes, to 13/-; Strawberries, to 9/-; Passions, to 7/6; Oranges, to 13/-; Lemons, 5/- to 7/6; others, to 4/-.

### New Zealand.

Dunedin (15/2/24).

Messrs. Reilly's Central Produce Mart Ltd. report, under date 15/2/24: —Apricots: Jam, 4d. to 5d.; dessert, 6d. to 9d. Peaches: Jam, 3d. to 4d.; dessert, 5d. to 8d. Local Grapes: Choice, 1/3 to 1/9; Oamarus, 1/2 to 1/6. Plums: Dessert, choice, 4d. to 6d.; Jam, 2d. to 3d.; Greengages, 3d. to 6d. Pears: Bon Chretien, choice, 2d. to 3d. Apples: Local cookers, choice, 7/6 to 8/-; desserts, choice Cox's, 12/6 to 14/6; others, 8/- to 12/-; Scarlet Gravensteins, 12/6; Nectarines: Choice, 5d. to 8d.; Jam, 4d. to 5d. per lb. American Lemons: 4/2/6. Pineapples: Choice, 17/6 to 22/-. Oranges: To arrive, 35/-. Mandarins: Wanted. Passions: 14/- to 17/-. Bananas: Ripe, 30/-; Raratongas, 27/6.

### "IT COULDNT BE DONE."

Somebody said it couldn't be done,  
But he with a chuckle replied  
That maybe it couldn't, but he'd be  
one  
Who wouldn't say so till he tried.  
So he buckled right in, with a trace of  
a grin  
On his face. If he worried, he hid  
it.  
He started to sing as he tackled the  
thing,  
That couldn't be done, and he did it.

Somebody scoffed, "Oh, you'll never  
do that;

At least no one has ever done it.  
But he took off his coat and he took  
off his hat,

And the first thing we knew, he'd  
begun it;

With a lift of his chin and a bit of a  
grin,

Without any doubting or quit it,  
He started to sing as he tackled the  
thing

That couldn't be done, and he did it.

There are thousands to tell you it  
cannot be done;

There are thousands to prophesy  
failure;

There are thousands to point out to  
you, one by one,

The dangers that wait to assail you;  
But just buckle in with a bit of a  
grin,

Then take off your coat and go to  
it;

Just start in to sing as you tackle the  
thing

That cannot be done, and you'll do  
it.

### SUBSCRIBERS' PAYMENTS RECEIVED.

The following are the subscriptions received from January 20th to February 20th, 1924. The month quoted in parenthesis indicates to what date the subscription is paid. These are exclusive of the subscribers who have paid to local agents or to our offices in the various States: —

G. Arbuckle (July, '24), Australian Dried Fruits Association (Nov., '24), F. W. Benyon (Nov., '24), Bowles & Son (Dec., '24), J. E. Brenton (Apl., '24), G. Brown (Jan., '25), J. Buckhorn (Nov., '24), A. G. Calvert (Dec., '27), Chateau, Mildura & Olivedown Pty. Ltd., Renmark (Jan., '26), Christchurch Nur. Co. (Mar., '25), John Cooper (Apl., '24), G. Costin (July, '24), H. E. Cox (Jan., '24), W. H. Crago (Oct., '24), Cutler Bros. (June, '24), H. P. Davenport (May, '24), J. Davies (Nov., '24), Deppe Bros. (Oct., '24), R. F. Dyson (Jan., '25), F. L. Edmonds (Jan., '25), Elliott Bros. Ltd. (Oct., '24), C. R. Fardeil (July, '24), Filsell Bros. (Oct., '25), D. Fopp (Dec., '24), John E. Franklin (Dec., '24), H. A. Fryer (Dec., '23), F. Payne Gallwey (Jan., '24), J. Kemp Glasson (June, '24)

R. J. Hannaford (Oct., '24), E. R. Hannaford (Sep., '24), H. Henderson (Oct., '24), E. P. Horton (July, '24), T. H. Houfe (Aug., '24), Joel and Son (Aug., '24), F. C. Johnson (July, '24), G. C. Linton (Nov., '24), H. E. Lyons (May, '24), J. H. Main (Dec., '24), R. Mays (June, '24), T. R. Michelson (May, '24), Millburn Bros. (Sep., '24), W. Moore (Sep., '24), M. Moore (Nov., '24), W. J. Muhlbach (Oct., '24), A. Murray-Jones (Jan., '25), R. J. Naylor (July, '24), C. P. Nobelius (Nov., '24), E. H. Norris (Aug., '24), Geo. Offley (June, '24), T. J. Owen (Nov., '24), F. O'Neill (Feb., '24), T. E. Parker (July, '24), R. W. Peacock (July, '24), T. J. Peart (Dec., '24), H. E. V. Pickstone (Oct., '24), L. Porter (May, '24), E. Pool (Dec., '24), S. Redgrove (July, '24), L. P. Rosen & Son (Oct., '24), H. S. Scobie (Oct., '24), F. Schultz (Dec., '24), R. M. Sheppard (Sep., '24), John L. Shiress (Nov., '24), H. W. Smith (Nov., '24), J. Smith (July, '24), Socrabalaach Vruchtenhuis (Dec., '24), C. Spencer (Nov., '24), A. Spivey (Aug., '24), Studley Preserving Company Pty. Ltd. (Nov., '24), Thos. Sutton (Sep., '24), A. Sublet (Oct., '24), J. Thomas (Nov., '24), F. W. Tippett (Sep., '24), John Tucker (July, '24), Mrs. Watson (Sep., '23), A. Waddell (Mar., '24), W. J. Weily (Sep., '24), E. Weitmayer (Oct., '24), T. C. Whiteside (Apl., '25), R. J. Wood (Nov., '24), G. E. L. Wrench (Dec., '24).

### Classified Advertisements.

#### Wanted and For Sale.

Advertisements under this heading, which cannot exceed one inch, will be classified as far as possible. Prices are as follows:—

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